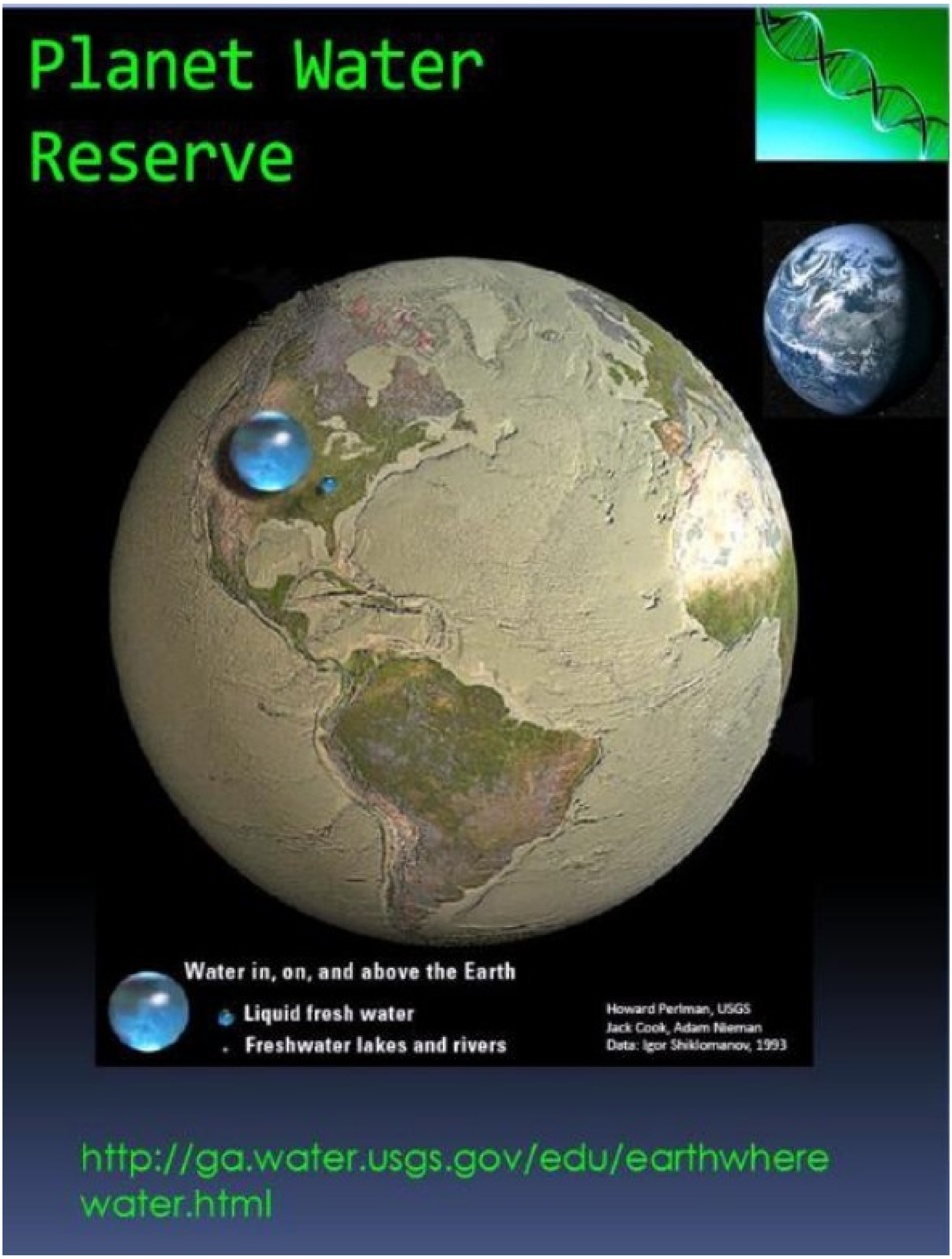


Planet Water Reserve

Water in, on, and above the Earth

- Liquid fresh water
- Freshwater lakes and rivers

Howard Perlman, USGS
Jack Cook, Adam Nieman
Data: Igor Shiklomanov, 1993

http://ga.water.usgs.gov/edu/earthwherewater.html

Global Environmental Crisis on Earth due to Actions of International Petroleum Corporations Producing Fuels Gasoline and Diesel Fuel from Petroleum and Thus Emitting Air CO_2 During Refining and More Air CO_2 During Fuels Use by Customers.

Foreword

This book is about the Global environmental crisis that Earth went into due to the actions of the international petroleum corporations. Increased production of the air CO_2 leads to the loss of the fresh water to the outer Space vacuum. In the outer Space the sucked by Space vacuum fresh water moves to any direction away from Earth. If you look at the water reserve of Earth you will see that fresh water in a very little amount of which only 30% are available for the consumption, the other parts of the fresh water are in the Ground or in the air as the fresh water vapors to be sucked by the Space vacuum. Severe shortage of the fresh water is anticipated in the next 10-25 years. Fresh water shortage means shortage of crops and livestock manufacture. That leads to the Global Starvation on Earth. The Author is the owner of several Carbon Negative fuel corporations projecting also the development of the Carbon Negative genetically engineered foods to cope with the Global Starvation. Certain capitalists are educated well enough to see the Environmental crisis outlined by the Author herein. They invest into the elaboration of the outer Space travel technology anticipating that the potion of the Earth population will travel to the unknown yet direction to the unknown yet planet found to be very similar to Earth by the temperature regimens and the fresh water availability. However the Author is persistent in the Earth location and offers the solution to said environmental crisis such as the development of Carbon Negative fuels and the Carbon Negative genetically engineered foods to cope with the consequences of the fresh water shortage. The Author trusts that the domination of the Carbon Negative technologies over the existing technologies based on the energy generation using the petroleum-originated fuels has to be implicated nationwide in the US and World-wide globally. Termination of the existing international petroleum corporations is essential not to mention that SHELL in 2018, on December 10, tried to kill the Author in the car accident (HPD report is available for reference) after the Author has presented to SHELL his Carbon Negative technology of the Gasoline replacement manufacturing from the air CO_2 with the manufacturing cost of $0.35 per gallon at the SHELL manufacturing cost of a gallon of gasoline (C_7-C_9) from petroleum for over $1.75.

This E-book has eight chapters. The seventh chapter is devoted to the tremendous therapeutic effect of the intestinal bifidobacteria’s surface polysaccharides to restore the gastro-intestinal epithelium of people sick with the Cholera infection.

The reader’s comments are very much appreciated by the Author.

Contents

Pages

Preface 2-3

Chapter 1. Electrotransformation of Acetogens. 5-33

Chapter 2. Carbon Negative Replacements of Gasoline and Diesel Fuel 33-57

Chapter 3. Carbon Negative Gasoline and Diesel fuel replacements 58-88

Chapter 4. Inexpensive Resolution of the Global Environmental Problem 89-110

Chapter 5. Industrial Use of Products from Acetogens

111-130

Chapter 6. Carbon Negative Mixes Comprising 1,1-Dibutoxybutane.

131-165

Chapter 7. New DNA Sequences Encoding Biosynthesis of Cell Polysaccharides in Bifidobacterium breve, B. longum and B. bifidum

166-242

Chapter 8. Sea Water Distillation as the Way to Fight Fresh Water Loss to the Outer Space

243-266

Chapter 1. Electrotransformation of Acetogens

The Author Dr. Michael Vladislavovich Tyurin, CEO, Executive Chairman, President of Microbial Biocatalyst International, Inc. and Inorgcarbdiesel, Inc..*Contact information*: PO Box 300230, Houston TX 77230, drmtyurin64@gmail.com.

The Author Dr. Michael Vladislavovich Tyurin had to change his second name from "Vladimirovich" to "Vladislavovich" after his father Prof. Dr. Vladimir Inljich Tyurin has changed his first name from "Vladimior" to "Vladislav" after the death of Dr. Michael V. Tyurin's mother Professor Dr. Aleksandra Nikolaevna Tyurina in 2017.

Abstract

Electrotransformation Acetogens to make biocatalysts suitable for the manufacture of the Carbon Negative fuels is very important. Liquid medium for ET of Acetogens is reported along with the composition of the solid medium for selection of the ET-transformants. We have identified the need for post ET incubation of the electrically treated cells in the rich medium for the development of the secondary membrane structures isolating the alcohols or solvents from the inner content of the cells which are toxic for them. The work on the Carbon Negative alcohols or solvents is essential for saving the fresh water on Earth since the air CO_2 has already passed the “Point of No return” (NASA terminology). The Author has proposed and already examined practically the new generation of the gas stations saving valuable time of our customers buying Carbon Negative fuels. We offer them additionally the stocks of bottled distilled water, raw food for home cooking and essential components for doing household maintenance and repairs. We offer also the ordering system for those who could not find desirable products at this type of gas stations. Said gas stations along with the carbon negative fuels and the details of their manufacture offer the magnificent toll for the removal of the gas stations owned by the international petroleum corporations in order to make the air CO_2 level like that was before the petroleum distillation and combustion of said distillation of petroleum products Gasoline and Diesel fuel. This seems to be the solution of the detected by the Author the environmental crisis on Earth.

Key words: Electrotransformation (ET); Acetogens; Carbon Negative fuels; inner membrane structures; high efficiency of ET of Acetogens.

Introduction

Much has been written on the electrotransformation of Acetogens [34-36]. However nothing has been written on the process of the electrotransformation itself and on the specific details of the electric response of Acetogens subjected to the high voltage pulse electric field of the electrotransformation generators. Most likely that happen because the commercial electroporation generators do not allow neither the development of the electric response of the high voltage treated cells nor the records of the electric pulses applied to the target cells [3,4]. We have to note that we used only the electrotrasformation Generator created by the Author in 1992 [1,2]. We have never used the electroporation equipment every lab has due to the circumstances clearly elaborated in [3]. Said reference expailns in detail why conventional electroporation equipmet is not applicable for electrotransformaion of Acetogens (Fig.1).

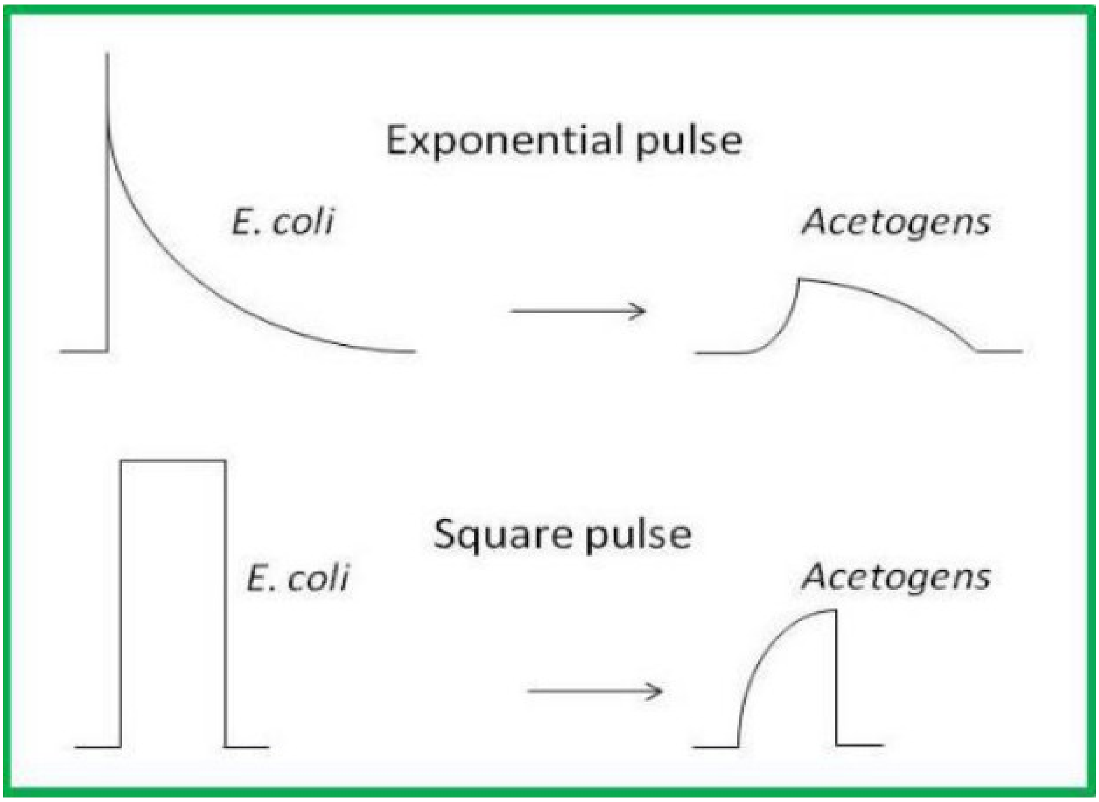


Fig.1. Distortion of the original square of exponential high voltage electric pulse in the widely used electroporation generators made by Bio-Rad, Inc. or BTX, Inc.

There is another circumstance not outlined at Fig. 1. The Author has patented the electrotarnsformation generator having the power capacitor 40 mkF and the power tetrode. The last element has the capability to amplify any current fluctuations in the treated sample since the treated sample is located at the anode part of said tetrode. The tetrode is a relatively high frequency current and voltage amplification element and it amplifies said fluctuations of the current passing through the treated sample (Fig. 2).

Said current fluctuations were recorded by the digital storage ocsilloscope and appear only at the part of the applied 6 ms square pulse used for the optimization of the electrotransformation parameters for Acetogens [3-17] (Fig. 3).

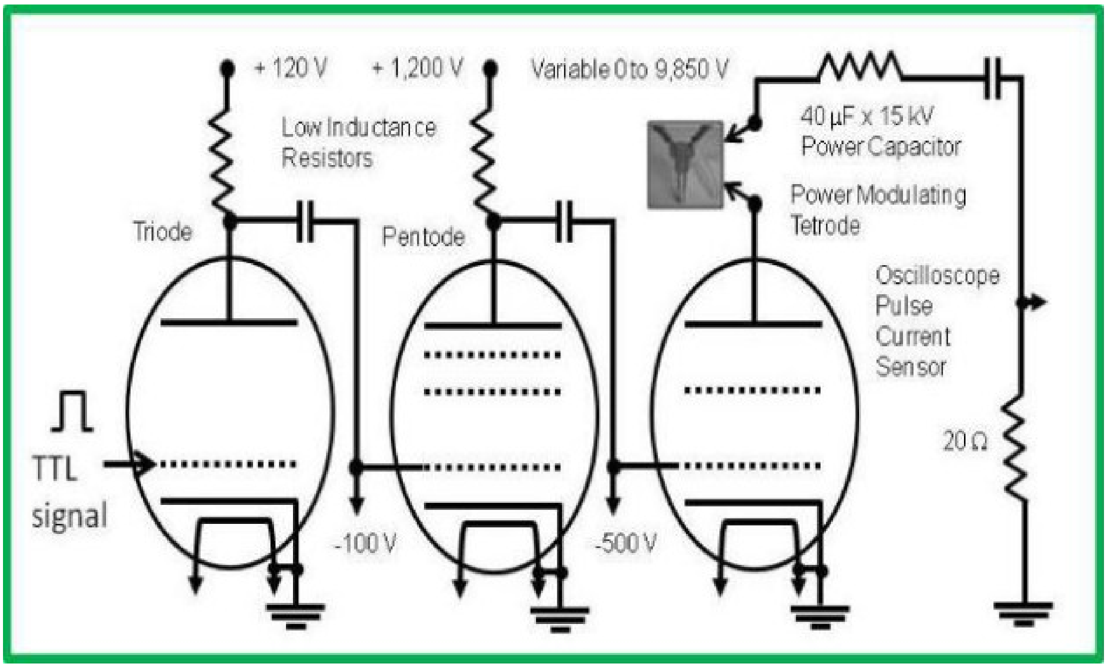


Fig. 2. Electrotransformation / electrofusion Generator invented by the Author [1,2].

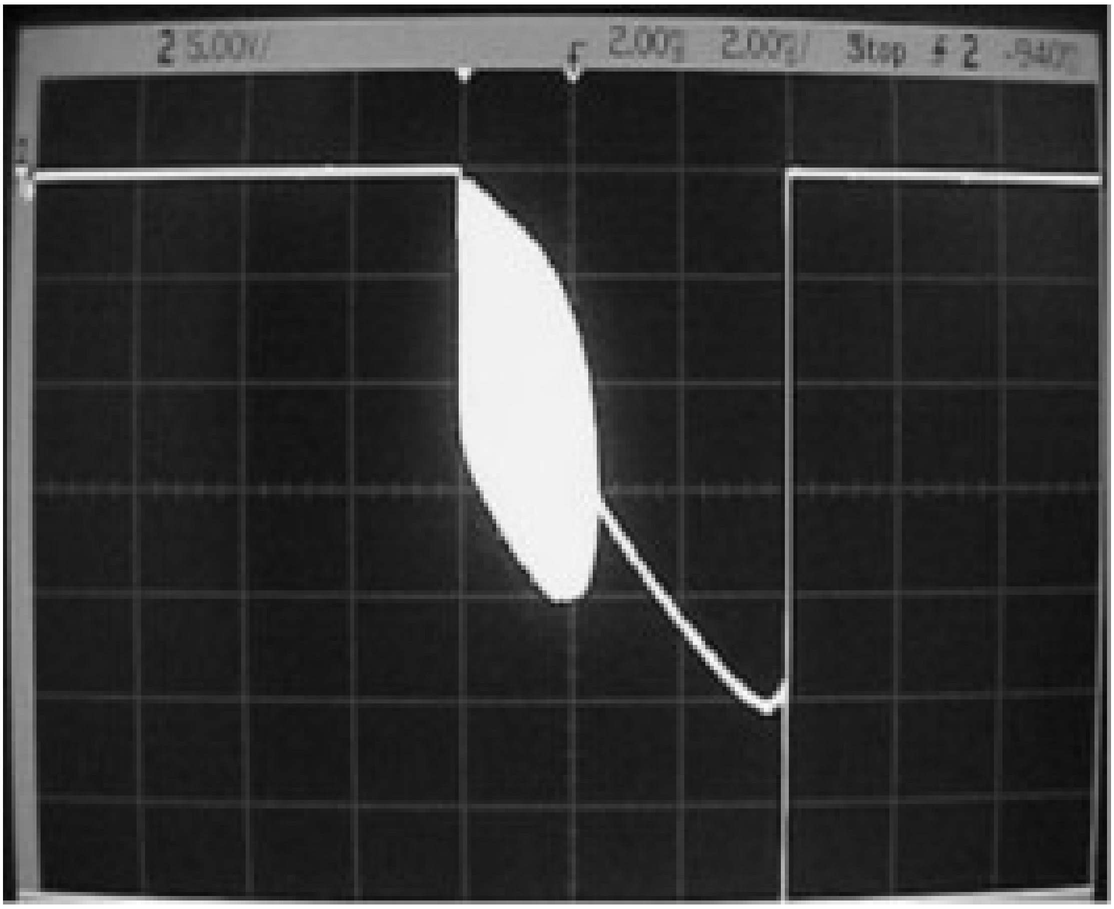


Fig. 3. Secondary oscillations inside the standard square electric pulse (6 ms) generated by the cells of Acetogens [3-17] electrotransformed using the Author’s Generator [1,2].

Said secondary oscillations were of about 26 MHz as shown in Fig. 4. The image shown in Fig. 3 was expanded to measure the duration of each oscillation shown in Fig. 3 at the end of the electrotranfromation parameters optimization pulse shown in Fig. 3. Fig. 4 has that part of the 6 ms optimization pulse expanded to determine the duration of each of said secondary oscillations which became the approximate number of $0.0384615384615385 \times 10^{-6}$ sec (5 nanosec is the value of one unit of the scale in Fig. 4).

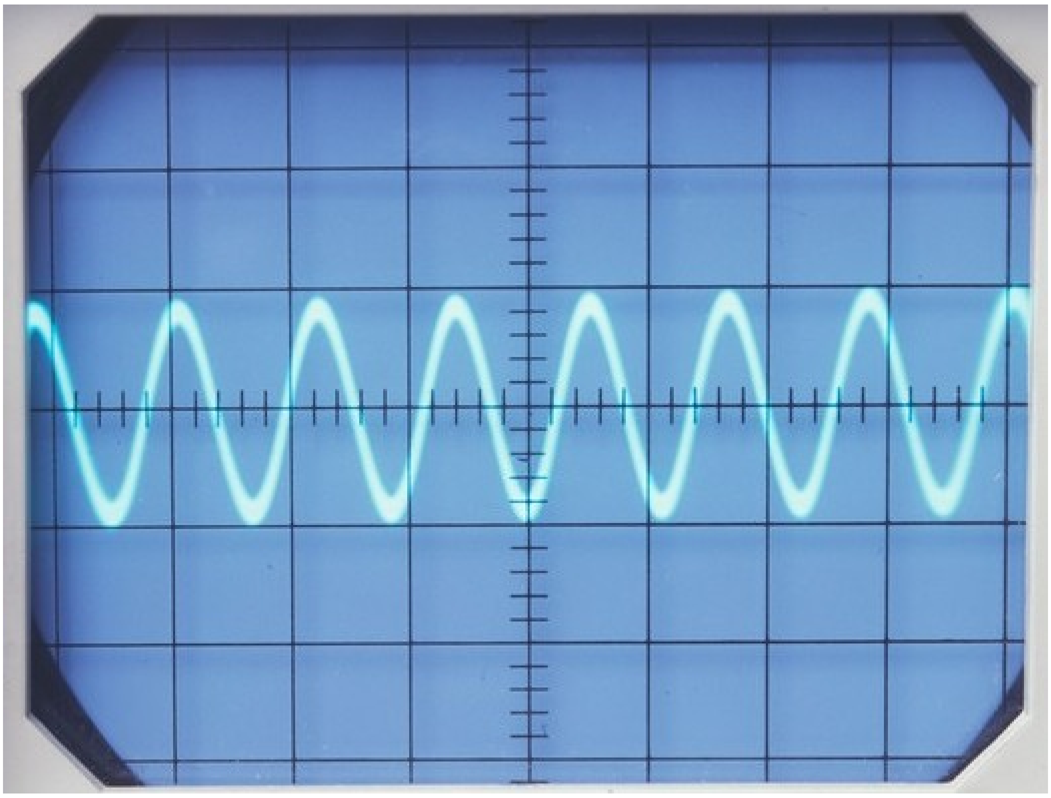


Fig. 4. The secondary about 26 MHz oscillations noticed during the electrotransformation conditions optimization for the Acetogens [4].

The Author has noticed the secondary pulse oscillations in 1997 [18] as that has been reported at the The 17 International Congress on Biochemistry and Molecular Biology in San Francisco.

The most intriguing thing about said secondary oscillations is related to the secondary membrane structures detected in the cells producing alcohols and solvents toxic for producing them cells of bacteria [19]. The Author has noticed said secondary electrotransformation pulse oscillations while doing electrotransfrmation of *Clostridium acetobutylicum* ATCC 824 at the laboratory of Prof. George N. Bennett at Rice University [20]. Specifically alcohols do the following to the cell membranes: 1) solvents such as alcohols or acetone increase membrane permeability. Lipids dissolve in alcohol, therefore, the phospholipids in a cell membrane will easily dissolve in solutions such as ethanol. As a result, the cell membrane becomes more fluid and permeable as it starts to break down; 2) the effect on membrane permeability depends on solvent type. Certain types of solvent can cause a greater degree of membrane permeability than others, for example, ethanol causes greater membrane permeability than methanol; 3) Increasing solvent concentration increases membrane permeability [19]. Solvent concentration and membrane permeability are directly correlated i.e. increasing solvent concentration increases membrane permeability. This is because as the solvent becomes more and more concentrated, it has a greater ability to dissolve phospholipids and disrupt the membrane structure, making it more permeable to external substances [19].

The most damaging effect of his electrotransformation generator has happened to the Author when he started to work of the cellulosic ethanol production for use it as fuel project at the laboratory of Prof. Lee Lynd at Thayer School of engineering at Dartmouth College in 2001-2006. Said Prof. Atempted to steal the Author’s intellectual property when attempted to patent already patented Electrotransformation / Electrofusion Generator [1,2]. His attempts made the Author to sue said College at the Federal Court and he will be suing again for the attempted murder of the Author committed by said Prof. at said College [26-31]. That activity immediately has developed after the success the Author had with the electrotransformation of *Clostridium thermocellum* strains [which none has achieved before [21-26] and has expanded way beyond said stealing of the Author's intellectual property by accepting venture funds from the criminal investor's structure Khosla Ventures in 2006. Khosla Ventures funds nearly dead businesses attempting to collect funds given to said dying businesses by the Governmental agencies as DOE, etc. (already after departure of the Author back to Houston TX) to start the criminal business Mascoma Corporation which ended up with bancruptcy of said company, while MASCOMA Corporation has filed legal paperwork on protection from buncruptcy [33].

In said particular case the successful electrotransfromation of *C. thermocellum* was accompanied by the secondary pulse oscillations at the frequency of abut 24 MHz [27,33].

It is very important to note that the Author has discovered the secondary membrane structures in the cells of bacteria producing alcohols or solvents (acetone). The role of said secondary membrane structures is unclear, but it seems logical to assume that production of alcohols or other solvents is toxic for the inner cell content. However the cells produce said alcohols or solvents. That means said secondary membrane structures are intended for the protection of the inner cellular content from said alcohols or solvents. What this specifically means time- and experimentally wise? The time is needed to create said structures if the synthetic DNA construct encodes the biosynthesis of alcohols or solvents in the cells. That is why we have used additional time and temperature for electrotransformation of Acetogens to allow the synthesis of said secondary membrane structures. For the electrotransformation of samples of Acetogens the cells subjected to the application of the optimal electric pulse are then kept on ice for 10 min, then are exposed to the temperature 26 ° C for three hours (water bath installed in the anaerobic chamber) and only after that are placed at the normal incubation temperature keeping in mind that after the application of the optimal electrotransformation pulse the target cells are diluted at least ten times with the growth medium of the best possible composition. Te same is noted for the electrotransformation of cells of *Clostridium acetobutylicum* [20] and *C. thermocellum* [33].

Materials and Methods

The cultures of Acetogens for the electrotransformation (ET) were grown in the fermentor similar to the 60 tons fermentation modules we use for biofuels manufacture but for the bench use with the total volume of 5 liters (Fig. 5). The cells from the agar plate (10 colonies) were inoculated into the 3.5 liters of the liquid Acetogen medium of the composition shown below. The total horizontal bioreactor volume was 5 liters. The liquid medium LM of the composition given below was filled at the volume of 3.5 liters. The gas was pressed to the fermentor at the pressure of 15 psi via the setup of the gas blend 0.1 mkm filters [37]. The culture of the

Acetogens was subgrown in the said fermentor for 3 h until the cell density at OD600 became around 0.52-0.55.

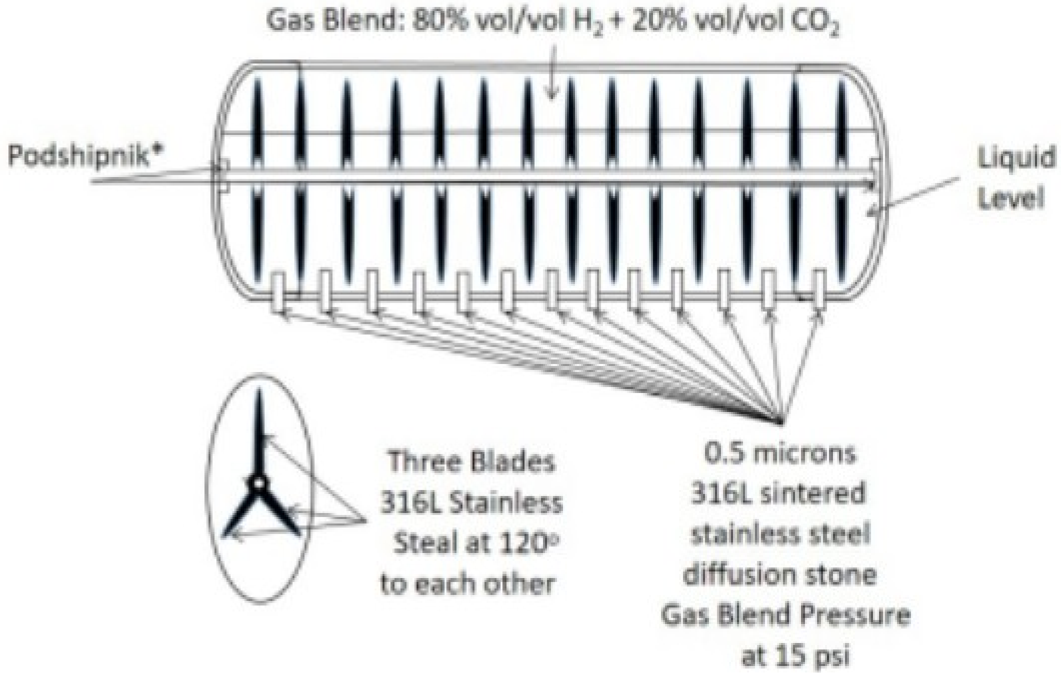

Gas Blend: 80% vol/vol H_2 + 20% vol/vol CO_2
Podshipnik*
Liquid Level
Three Blades 316L Stainless Steal at 120° to each other
0.5 microns 316L sintered stainless steel diffusion stone Gas Blend Pressure at 15 psi

Fig. 5. The horizontal bioreactor used to grow the cultures of Acetogens preparing them for the electrotransformation (ET).

As you could see from Fig.5 the horizontal bioreactor fro the Carbon negative fuels production using the Acetogens biocatalysts is filled with the liquid medium LM for 70%. By the perimeter of each of the 13 stainless steel 0.5 micron diffusion stones we have three in the submerged to the liquid diffusion stones, the total number of said stones per each bioreactor is 39 - 42, depending on the variations of the size of the bioreactor which has to be stating from 60 tons and up from that a little bit. Therefore, the total number of the stainless steel diffusion stones with the diameter of pores of 0.5 micrometers is from 39 to 42. The diffusion stones are located in three feet distance from each other per the section of perimeter of the horizontal bioreactor.

The liquid medium for the growth of Acetogens LM, g/L:

Caseine Trypton	1.0
Yeast Extract	1.0
$NaHCO_3$	3.5
KH_2PO_4	0.5
NaCl	0.4
NH_4Cl	0.4
$MgCl_2$ x $6H_2O$	0.33
$CaCl_2$ x 2 H_2O	0.05
Resazurin	0.001
Yeast extract	2.0
Casiene Tripton	2.0
Nicotinic acid	0.025
Cyancobalamin	0.025
Para-aminobenzoic acid	0.025
Ca D-pantotenat	0.025
Thiamine x HCL	0.025
Riboflavin	0.025
Lipoic acid	0.015
Folic acid	0.0001
Biotin	0.0001
Pyridoxal - HCL	0.005
Sodium nitrilotriactetate	0.0075

$MnSO_4$ x H_2O	0.0025
$FeSO_4$ x 7 H_2O	0.0005
$Co(NO_3)_2$ x $6H_2O$	0.0005
$ZnCl_2$	0.0005
$NiCl_2$ x6H2O	0.00025
$CuSO_4$ x $5H_2O$	0.0005
$AlK(SO_4)_2$ x12 H_2O	0.0005
H_3BO_3	0.0005
Na_2MoO_4 x 2 H2O	0.0005

Distilled water to the volume of 1 L.

pH 6.5

The Solid medium (SM) for the growth of single colonies and the selection of eletrotransformants was used, g/L:

Beef extract	5.0
Yeast extract	5.0
Peptone from meat	5.0
Pepron from soybeans	5.0
Glucose	10.0
NaCl	2.5
Heart infusion broth	10.0
Tryptic soy broth [40]	30.0
Agar-agar [39]	15.0
Distilled water to the volume to	1 L

pH 6.5 adjusted with HCL concentrated

Autoclaving at 120° C for 30 min.

After the ET the treated with an optimal ET pulse cells were diluted with 0.5 ml of the Acetogen ET recovery medium (RM) of the following composition, g/L:

Tryptic soy broth [40]	30.0
Horse serum (heat inactivated)	200 ml*

pH before autoclaving 35 min at 120°C has to be 6.5, Use HCL concenrated to adjust if not.

Distilled water	up to 1 L.

*Horse serum should be heat inactivated at 56ºC for 30 minutes before mixing with the medium before its autoclaving.

The diluted Acetogen cells were incubated at 26 ° C for 3.5 hours to allow the building of the intracellular membranes essential for the protection of the intracellular content from the toxic fuel Isobutanol [4] or the solvent acetone [38]. the the electotarnsformed samples were plated on the solid selective agar.

Results

In 72-96 h we have selected the recombinant transformants. The fuel Isobutanol producing recombinants have used the pathway shown in Fig. 6 [4,5,7,13,15,16,36].

Fig. 6

The acetone producing recombinants have used the genetically engineered pathway [38] shown in Fig. 7.

Fig. 7

Fig. 6. Fuel Isobutanol byosynthesis from the air CO_2 [4,36].

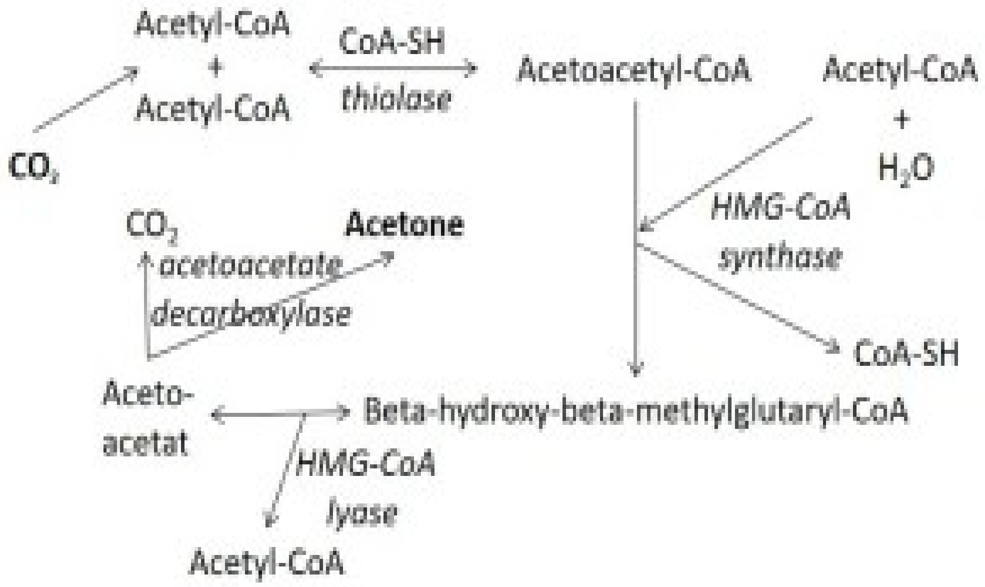


Fig. 7. Acetate biosynthesis from the air CO_2 [38].

The recombinants suitable for the Carbon Negative fuel Isobutanol or fuel Acetone biosynthesis in the 60 tons horizontal bioreactors of the same type as shown in Fig. 5 were obtained with the relative frequencies of about $6.9x10^5$ recombinants per the microgram of the recombinant DNAs used [4,36,38].

The productivity of these recombinants has been published already [4-13,15-17,38].

Discussion

It is very imprortant to note that the post-ET incubation at 26 ° C was crucial for the reported herein high ET efficiency. Said ET efficiency is the consequence of our proposition made before these experiments about the need to reach biosynthesis of the secondary membrane structures discussed in the Introduction section. That appears that in the selective conditions of the ET transformants selection we were right and allowed the biosynthesis of that secondary membranes protecting inner cellular content from the toxic fuel Isobutanol or the solvent Acetone. The time used 3 h has never been experimentally adjusted in both directions; to reduce or extend it. Apparently, the exact timing for the secondary membranes biosynthesis is very important since our recombinant constructs indeed encode the biosynthesis of the alcohol or solvent which are very toxic for the intracellular content.

It is important also that the dilution of the ET cell targets was performed with the rich nutrient medium RM chilled to around 0 ^{o}C. hre is the possibility that additional play might be important with the composition of this rich medium RM.

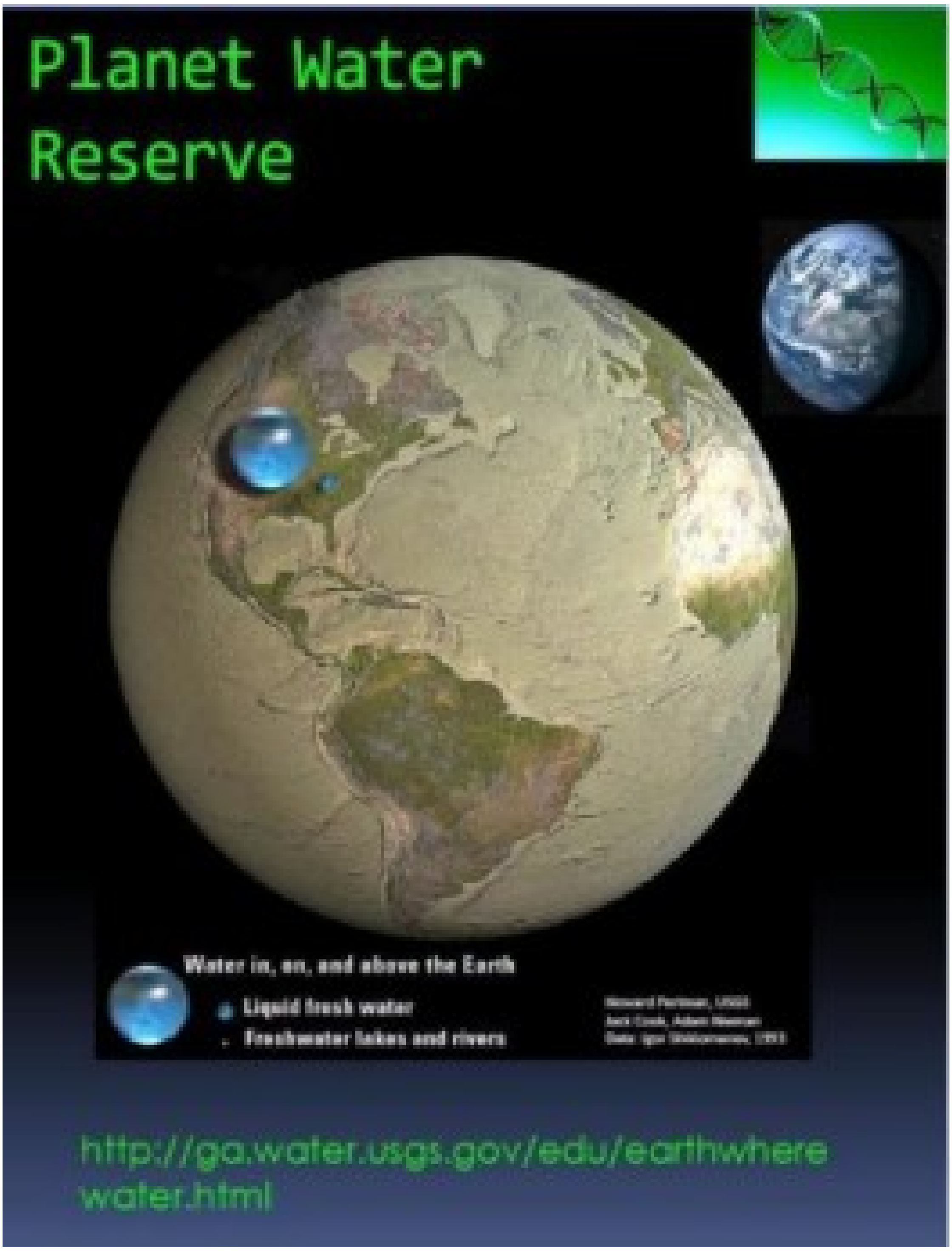
We report our finding herein since we do not plan to adjust any of the cited herein ET conditions since we have reached the purpose of the ET - achieve the obtaining of the recombinants suitable for the bulk manufacturing of said Carbon Negative fuels [4,36,38].

In general we must admit that the ET efficiencies obtained as reported herein might be the maximal as that has been postulated before [42,43].

Why do we need the carbon negative fuels? The current problem is that the air CO_2 concentration is very high. It is much higher of the reported earlier by NASA in 2010 when NASA called the air CO_2 content of 400 ppm the “Point of No Return” to the healthy environmental restoration of our planet Earth [44]. The air CO_2 is among the heaviest gases composing the air gas blend. At th average air density of 1.22 g/m^3 the density of the air CO_2 is 1.97 g/m^3 [44]. Therefore the air CO_2 spreads on the Ground. Ground is the known refuge of the fresh water: fresh water from rains, melting ice and snow. From the Ground all the cricks and rivers start ending up at the ocean, lakes and ponds. Besides being the heaviest gas in the air blend of gases air CO_2 has the known property - it absorbs the solar infra red energy converting it to heat. As the consequence of that the ground become warmer. In the Southern US states the ground temperature might even exceed the water boiling temperature under the normal pressure. What that means? Heating of the Ground increases fresh water evaporation. The Author has come to Houston in 1998. He remebers deep bottomless blue Houston sky at that time. What do we have now in the same Houston? Rains are almost daily. One might say: “Yes this is good, this is the fresh water falling to the Ground.”

Indeed this is true, but that also means that the amount of fresh water vapors in the air exceeds the critical for rain fall magnitude. That means that now we have so much fresh water in thew air that in Houston rain is almost daily.

The layer of the Earth atmosphere is only about 400 miles thick. The atmosphere is attached to the Ground by the gravity force. What is at the other end of the earth atmosphere? There is the Space vacuum. In 2010 NASA has found ice on the dark side of the Moon (-293 ° C) located in the distance of 220,000 miles from the Earth. Compare the diameters of the Earth and the Moon. Moon worked as the “cold trap” in the Space vacuum surrounding our planet. It collected the small portion of the coming from Earth to the outer Space vacuum fresh water vapors and they have formed the ice detected by NASA in 2010 [44]. What is going to happen if we constantly loose fresh water vapors sucked by the outer Space vacuum? In 10-25 years from now we are going to experience the shortness of the fresh water on Earth. The Earth fresh water reserves are shown in thew governmental picture (Fig. 8.).



Planet Water Reserve

Water in, on, and above the Earth

- Liquid fresh water
- Freshwater lakes and rivers

http://ga.water.usgs.gov/edu/earthwherewater.html

Fig. 8. Fresh water reserves of Earth [45].

As you could see from this picture (Fig. 8) the fresh water reserves of Earth are very limited. 3% of the Earth's water is fresh. 2.5% of the Earth's fresh water is unavailable: locked up in glaciers, polar ice caps, atmosphere, and soil; highly polluted; or lies too far under the earth's surface to be extracted at an affordable cost. 0.5% of the earth's water is available fresh water [46]. Where such water came from? This is great question with no definite answer. Did it come from Space? Likely, but a research is needed top say so.

As the Author considers we do anticipate the fresh water shortage on Earth in just 10-25 years from now. What that means? That mean shortage of crops and livestock production. In 10-25 years from now we would be facing the Global starvation era. Many educated venture capitalists already know that. Jeff Bezos blasted into space on his rocket company’s first flight with people on board becoming the second billionaire in just over a week ride his own spacecraft. Mr. Jeff Bezos own one of his companies a company Blue Origin with the purpose to develop the spacecraft capable of outer Space travelling to find a suitable for living of human beings planet with Oxygen in the atmosphere and fresh water reserves [41]. Mr. Elon Musk is developing a vehicle that could be a game-changer for space travel. Starship, as it's known, will be a fully reusable transport system capable of carrying up to 100 people to the Red Planet. Mr. Musk own his own spacecraft manufacturing company Space X [47]. Mr. Musk attempts to reduce the costs associated with the Space travel [48].

Air CO_2 accumulated enormously due to the burning of the fuels in the cars, aircrafts, ships, etc. People also breathe as well as the animals on our planet. The Author has noticed the air CO_2

content is very high in the year of 2000-2001. In 2010 NASA has detected the air CO_2 level of 400 ppm [44] noting that level of the air CO_2 as “the Point of No Return” to the healthy self-maintained environment. Indeed, the air CO_2 as any CO_2 selectively abrosrbs the solar light infra-red energy converting it to heat. As one of the heaviest gases of the air gas blend CO_2 has density of 1.97 g/m^3 at the average air gas blend density of 1.22 g/m^3. As such the very hot air CO_2 under no wind conditions mixing the air gases spreads on the surface of the Ground and over the sea/ocean water. As such the Ground as the refuge from the fresh water (any creek, river start from under the Ground and end up in the sea or the lake, pond, etc. Therefore the hot air CO_2 heats the fresh water in the Ground even making it boiling in the Southern States of the US. As the result the fresh water evaporates. The similar picture is with the air CO_2 over the sea, ocean. As the example, we might refer to the recent changes of the weather in Houston TX. In 1998 when the Author came to the USD the sky was always blue and bottomless (bottomless is the personal approximation. The air layer over the Ground is only 400 miles thick and the other side of said air layer faces the Space vacuum). No clouds, always blue sky. In the year 2023 sky is always covered with clouds, rains are as often as almost every day. Why does this happen? Global Warming [49]. “The lowest-emissions scenario, which assumed steep cuts in greenhouse gas emissions beginning in 2015, predicted that the global mean surface temperature would increase between 1.0 and 1.8 °C (1.8

and 3.2 °F) by 2100 relative to the 1850–1900 average. This range stood in stark contrast to the highest-emissions scenario, which predicted that the mean surface temperature would rise between 3.3 and 5.7 °C (5.9 and 10.2 °F) by 2100 based on the assumption that greenhouse gas emissions would continue to increase throughout the 21st century. The intermediate-emissions scenario, which assumed that emissions would stabilize by 2050 before declining gradually, projected an increase of between 2.1 and 3.5 °C (3.8 and 6.3 °F) by 2100."[49]. So, the Houston weather is now determined by the water evaporation from the surface of the Mexican Gulf located near the equator where the Sun offers for free up to 1,330 Wt/m^2 of surface [44].

Loss of the fresh water to the Space vacuum has been detected by NASA in 2010 when they bombarded the Moon surface to examine the composition of the Moon debris. They have found plenty of ice on the dark surface of the earth satellite. Where di that water came from? It came from the Earth air as the Fig. 9 explains.

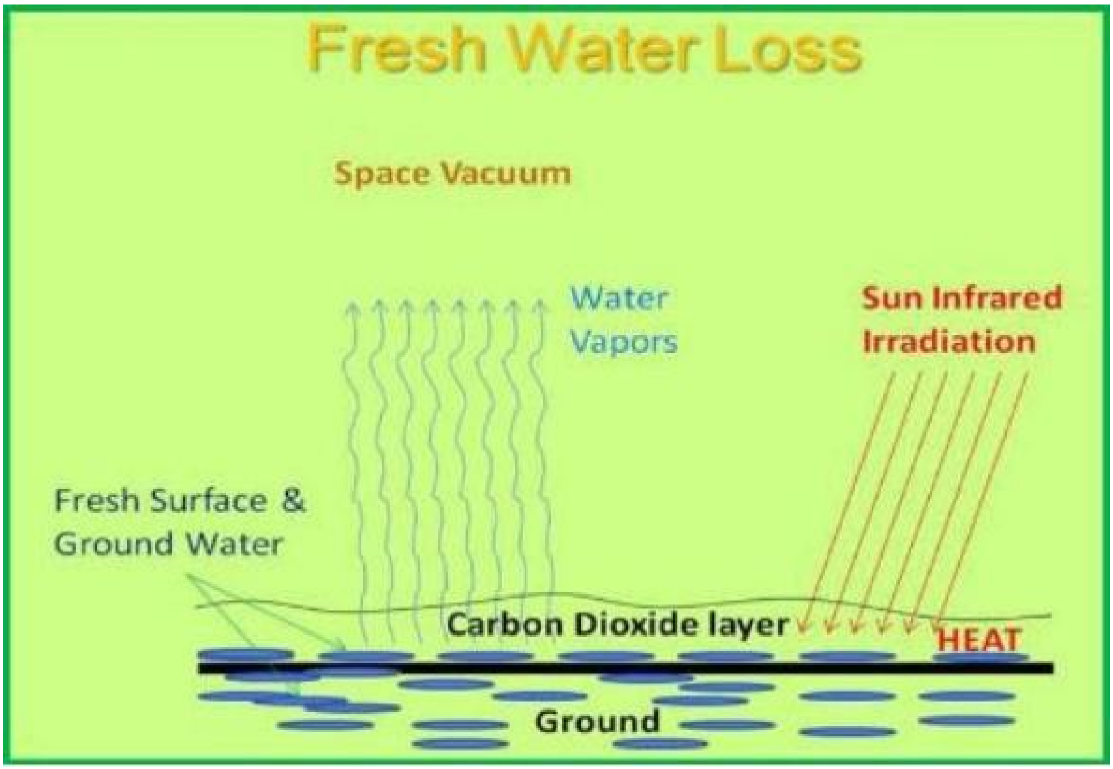


Fig. 9. Evaporation of fresh water from the Earth Ground and the surface of the sea / ocean.

As Fig. 9 shows, the Ground is affected. But what about the surface of the salty water in the ocean? It is one and the same. The air CO_2 as the heaviest gas of the air gas blend speads by the gravity force over the Ground and over the ocean waters. It selectively absorbs the Sun lht infra red energy converting it to heat. The Author is not sure what about the temperature at the sharp edge of the air CO_2 and the salty ocean water just beneath it, but it is quite possible that the fresh water evaporatyes from that salty ocean water much faster at the elevated around air CO_2 these days compared to the days of the year 1900 when the intensive petroleum recovery and distillation by the international petroleum corporations elevated the air CO_2 levels to above 450 ppm now [50].

As the part of the Global Warming consequences we do anticipate the shortage of the fresh water on Earth in the next coming 10-25 years. Shortage of the fresh water means shortage of the crops and livestock production. Therefore, in this anticipation we offer the new type of the gas stations selling not only the Carbon Negative fuels but also genetically engineered foods for home cooking, vegetables, plenty of the distilled water we are going to produce from the salty sea water along with the goods ordering system similar to the Walmart goods ordering system but offering the goods the customers could not find in the new type of said gas stations asd the Fig. 10 shows.

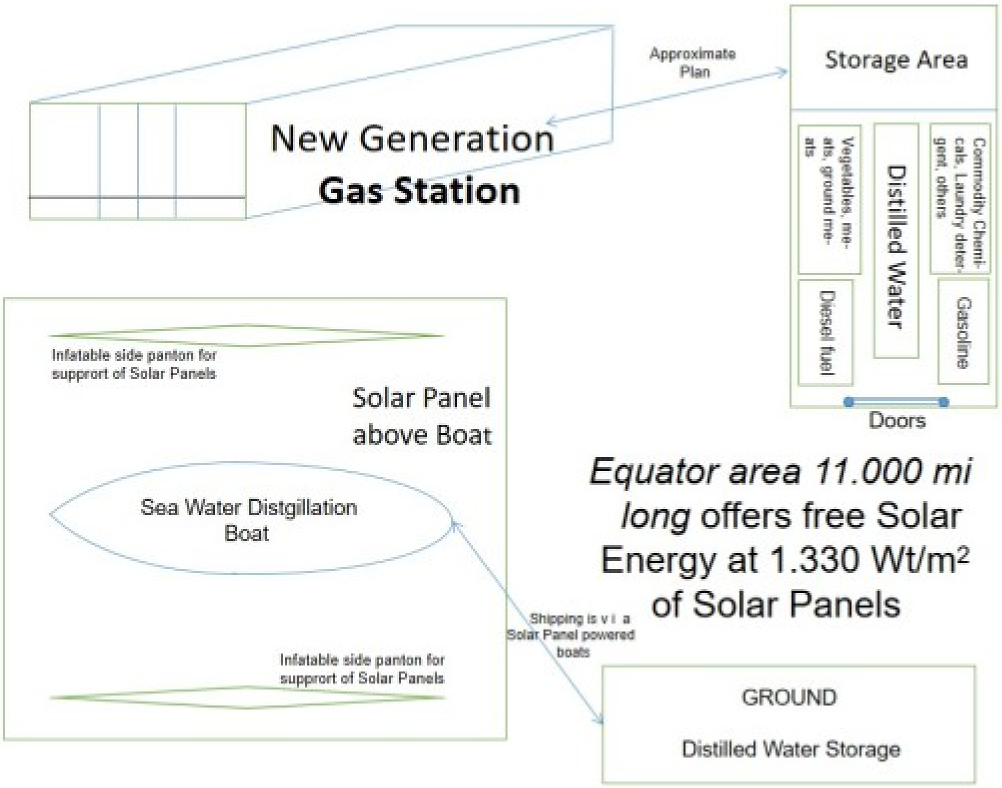

New Generation
Gas Station
Approximate Plan
Storage Area
Vegetables, me-ats, ground me-ats
Distilled Water
Commodity Chemi-cals, Laundry deter-gent, others
Diesel fuel
Gasoline
Doors
Infatable side panton for supprort of Solar Panels
Solar Panel above Boat
Sea Water Distgillation Boat
Shipping is v i a Solar Panel powered boats
Infatable side panton for supprort of Solar Panels
Equator area 11.000 mi long offers free Solar Energy at 1.330 Wt/m2 of Solar Panels
GROUND
Distilled Water Storage

Fig. 10. The new type of gas stations which is supposed to replace the existing gas stations belonging to the major international

petroleum corporations heavily producing the air CO_2 during petroleum distillation to Gasoline (C_7-C_9) and Diesel fuel (C_{10}-C_{15}) fractions of petroleum at the refineries (in the Continental US there are over 80 petroleum refineries producing abundant air CO_2) and via sales of their Gasoline and Diesel fuel producing even more the air CO_2 contributing to the Global warming.

So, we are here, on Earth, and we attempt to save our planet, to save its fresh water. We have done in that direction very much. If we would be able to reduce the air CO_2 level to the level of the air CO_2 much before the wide discovery of petroleum and its distillation to manufacture the Gasoline and the Diesel fuel from the petroleum (along with the fuels for the aircrafts) we would be able to not only reduce the level of the air CO_2 but also preserve the Earth's fresh water. We are developing the Carbon Negative genetically engineered foods for the time of the fresh water shortage which that will take to get rid of the world's international petroleum corporations and replace them with only the Carbon Negative fuels manufacturing corporations.

So, the Earth's future is in our hands.

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Chapter 2. Carbon Negative Replacements of Gasoline and Diesel Fuel

Abstract

There is a global environmental problem our Planet experiences now due to above normal air CO_2 accumulation. We expect that happening in the next 10-25 years. We are not Mediums to tell exactly when but we do anticipate coming soon shortage of the Earth fresh water and related to that shortage of the livestock and crops manufacturing. We have offered the solution - to establish the dominance of the Carbon Negative fuels manufactured from the air CO_2 and offer to the customers the Carbon Negative foods manufactured from the air CO_2. We have established the new generation of the gas stations offering to customers not only carbon negative fuels but also the abundance of the foods for the home cooking and basic household goods. Resulted time saving seems to be very optimal definitely attracting more customers to the new gas stations.

Key words

Global environmental problem; shortage of Earth’s fresh water anticipated; Carbon Negative fuels; new generation of gas stations; time saving for customers.

Introduction

Recent changes at the top of the US Executive administration have been combined with the not very wise decisions to cut down the petroleum imports from the Russian Federation. The free market economy of the US immediately reacted by skyrocketing of the Gasoline and the Diesel fuels prices at the gas stations to the levels affecting all other prices nationwide. For instance the cost of the TX DL skyrocketed from $11 USD to $33 USD (the coefficient of recalculation all the prices this year vs. year of 2021 and below is up to 3 and above - the rule of the market economy). That coefficient 3 and above 3 is typical for the increase of other prices nationwide as the major price-wise rule of the free market economy [1]. Subsequently, the proper running of the US economy is possible only with the very wise decisions of the top of governmental administration. We offer herein the Carbon Negative replacements of the Gasoline and of the Diesel fuel manufactured from petroleum by the same fuels manufactured from the air CO_2. Nationwide replacement of the technologies based on the use of petroleum as the source of chemicals or the fuels manufactured by the Carbon Negative technologies is absolutely essential since the Earth has passed the level of the air CO_2 400 ppm, the “Point of No Return” per the NASA discoveries of 2010 [1]. Now the air CO_2 exceeds 450 ppm and goes up based of the wide distribution of the intensive transportation based on the use of petroleum-derived Gasoline and Diesel fuel [1].

We describe herein the use of Carbon Negative fuel Diacetyl alcohol (DAA). The other Carbon Negative fuel we offer is the Gasoline replacement fuel Isobutanol synthecized by the Acetogen biocatalyst which we have developed earlier [20].

Our offering of fuel DAA and fuel Isobutanol as the Carbon Negative fuels if accepted before said recent changes in the petroleum imports could substantially affect the fuel price increase and support the stealth running of the National economy. We also project the new gas stations nationwide which will save a lot of time for the customers driving fore shopping purposes. The new gas stations will never affect the functions of the existing gas stations, the last ones will die themselves due to the market competition forces.

The new gas stations will sell not only Carbon Negative fuels but also the wide range of the essential consumer goods including also the food for the food cooking at home (Grocery Supplies) when the customers with the gas tanks filled by the Carbon Negative fuels also would be able to save their time and their fuel also by the purchasing of the essential consumer goods for their food cooking and for their households maintenance [4]. This is the new strategy which have never been used before at the existing gas stations. We reasonably anticipate the substantial profits from this type of the new gas stations. Probably if we succeed then our positive experience might be transferred Nationwide and World-wide [1 - 4].

Let me go to the Carbon Negative fuels sales - Carbon Negative replacements of Gasoline and Diesel fuel. Earlier we have published the Diacetone Alcohol (DAA) as the Carbon Negative replacement of the Gasoline and Diesel fuel. DAA might be produced by the condensation of the two Acetone molecules over the alkaline catalyst [1-3,5-11]. The explosion energy of DAA is way above the explosion energy of the Diesel fuel manufactured by the major international petroleum corporations from the petroleum [1-3,5-11]. Therefore, we have to pray that our customers will check their engines regularly with the qualified mechanics for the potential damages to the combustion chamber gaskets which potentially might be caused by the use of DAA in the existing trucks due to the much higher energy of the DAA explosions in the cylinders offering the substantial increase of the engine power at the similar fuel expense as for the Diesel fuel f[manufactured from petroleum. Therefore the manufacturers of the diesel trucks will have to make certain changes to the design of their trucks to accommodate much higher explosion energy of the fuel DAA, the Carbon Negative replacement of the offered Carbon Negative Diesel fuel. With the Gasoline powered trucks this might be unnecessary however their manufacturers have to acknowledge the massive use of the Carbon Negative Gasoline replacement and make certain changes improving the mechanical resistance of the gaskets in the engine compartment as well, just to be sure the driving is safe as before. Not to mention herein that the international petroleum corporations now spend $1.75 to manufacture 1 gallon of Gasoline or 1 gallon of the Diesel fuel. That eventually affects the sales prices of the Gasoline and the Diesel fuel even now well exceeding $3 at the most of the gas stations in Texas and in the US [1,20].

Briefly we will remind the readers how we made Carbon Negative DAA and how the acetone, the predecessor of the DAA, is made from the carbon of the air CO_2 [12]. In the custom-modified anaerobic chamber AS-580 (Anaerobe Systems, Morgan Hill, CA, USA) the constant anaerobic atmosphere of 20% CO_2 and 80% H_2 was maintained during the operations. We have modified the initial strain of Acetogens to make it resistant to fuel Acetone at the concentrations of the Carbon Negative fuel Acetone the biocatalyst produces [14]. The resulting Carbon Negative fuel Acetone production was detected as high as 1.8 Mol [14]. The produced fuel Acetone was collected from the fermentation broth by distillation and then used to produce the DAA as described [7-10]. The resulting DAA was concentrated by distillation and transferred to the new type of the Carbon Negative gas stations as mentioned above.

The purpose of this writing is to continue convincing the readers of the need to replace the international petroleum corporations by the corporations producing Carbon Negative fuels from the air CO_2. Briefly we will remind the readers that the CO_2 is one of the heaviest gases of the air blend. Its density is 1.97 g/m^3. The average air gas blend density is 1.22 g/m^3. Therefore the air CO_2 is covering the Ground. The Ground is the natural trap for all falling water: rains, meting snow, ice, etc. Ground is the start for all creeks, rivers, lakes and ponds. In southern US states the Ground temperature in summer exceeds water boiling temperature at the normal pressure. Air CO_2 selectively absorbs the Sun infra red energy converting it to heat energy and the air CO_2 is covering the ground, the refuge for the fresh water. Therefore, water is boiled there and no water comes to where it is supposed to come - to rivers, lakes and ponds. The same is about the oceans surface where the air CO_2 under the no wind conditions covers the surface of the sea water. Fresh water evaporates from the sea water and goes as the fresh water vapors to the air. Again the thickness of the air layer is 400 miles, one its side comes in touch with the Ground or the surface of the seas / oceans while the other side comes in touch with the Space vacuum which sucks the fresh water vapors from the air layer covering the Earth and attached due to the gravity force.

It it definitely remarkable how fast the weather pattern has changed from Houston TX. Whe the Author has arrived to Houston in 1998 the sky was always bottomless blue and with with no any clouds. In 2020-2023 the weather profile in Houston TX has significantly changed. The over accumulated air CO_2 by the gravity force is at the bottom of the air layer which thickness is only 400 miles and the top of it is in contact with the Space vacuum. So, ther increased air CO_2 covers not only Ground but also the surface of the ocean / sea / the Mexican Gulf. I am not confident what are the temperatures there but now the clouds are in Houston on a daily basis. The day starts from the blew bottomless sky, the Sun shines and hits whatever it is supposed to. With the increased air CO_2 since 1998 Mexican Gulf water evaporates enormously. Fresh water vapors get condensed into clouds which with the wind from South cover the sky over Houston TX starting from early afternoon. By about 6-8 PM there might be the rain. Again, the rain water comes to the Ground which is the refuge for the fresh water giving the start to the creeks, rivers, etc. However, the amount of the air fresh water vapors is much higher than that was 25 years back, and such fresh water vapors gets sucked by the Space vacuum. The same now becoming very huge environmental problem. Look at the time which that took: 25 years to change Houston weather almost completely. Again, we are not the Mediums to predict future but our projections of the anticipated in 10-25 years from now shortness of the fresh water and the crops / livestock manufacturing are very much justified by the above notes of the Houston weather profile change.

There is the Governmental picture of the fresh water reserves on our planet Earth (Fig.1). Again, the air thickness is only 400 miles and the air is attached to the Ground by the Gravity force. The other side of the Earth atmosphere contacts the Space vacuum above the air layer. Therefore the water vapors are sucked by the Space vacuum as above. In 2010 NASA has discovered plenty of ice on the dark surface of the Moon. Compare the diameters of the Moon and the Earth. Now you might possibly understand my concern (Fig.2). None in the Governments tells you about the coming danger: I might guess that in 10-25 years from now there will be a great shortage of the fresh water on Earth, I am not a Medium to predict that, but the signs of that are obvious. No fresh water means no livestock and no crops production. Global starvation. People will kill for the hamburger and the glass of fresh water.

We offer herein the explanation how we have reached that elevated acetone manufacturing using our constructed Acetogen biocatalyst compared to the known the ABE process of acetone manufacturing using the engineered strains of C. acetobutylicum. Acetogens do not have known regulation for the expression of the synthetic genes encoding acetone biosynthesis. The artificial metabolic pathway common for eukaryotic cells making acetone from acetyl-CoA was engineered in the biocatalyst. Engineered strain demonstrated stable continuous syngas fermentation for about 25 days in the five independent runs. Similar biocatalyst performance was achieved on the combined CO_2/hydrogen atmosphere. Each such fermentation could be run longer if needed. Continuous fermentations are cost-wise more beneficial compared with fed-batch fermentations. Continuous fermentation increases efficiency of the capital equipment use from ~35 to about 75% because owing to shortening time waste for intercycle maintenance as the mandatory part of any fermentation process [19].

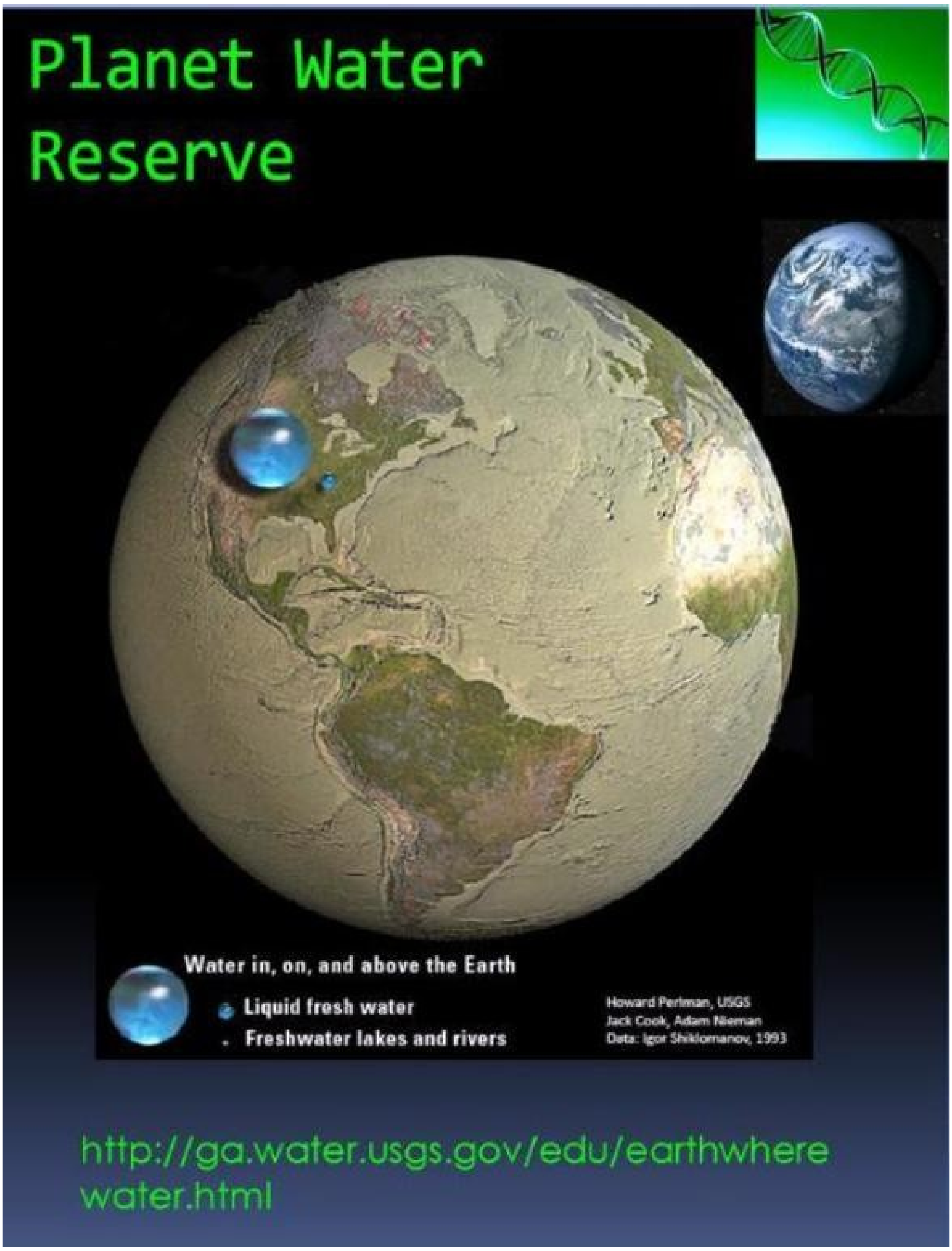
Planet Water Reserve
Water in, on, and above the Earth
Liquid fresh water
Freshwater lakes and rivers
Howard Perlman, USGS
Jack Cook, Adam Nieman
Data: Igor Shiklomanov, 1993
http://ga.water.usgs.gov/edu/earthwhere water.html

Fig. 1. Governental picture: water reserves of Earth [http://ga.water.usds.gov/edu/earthwherewater.html].

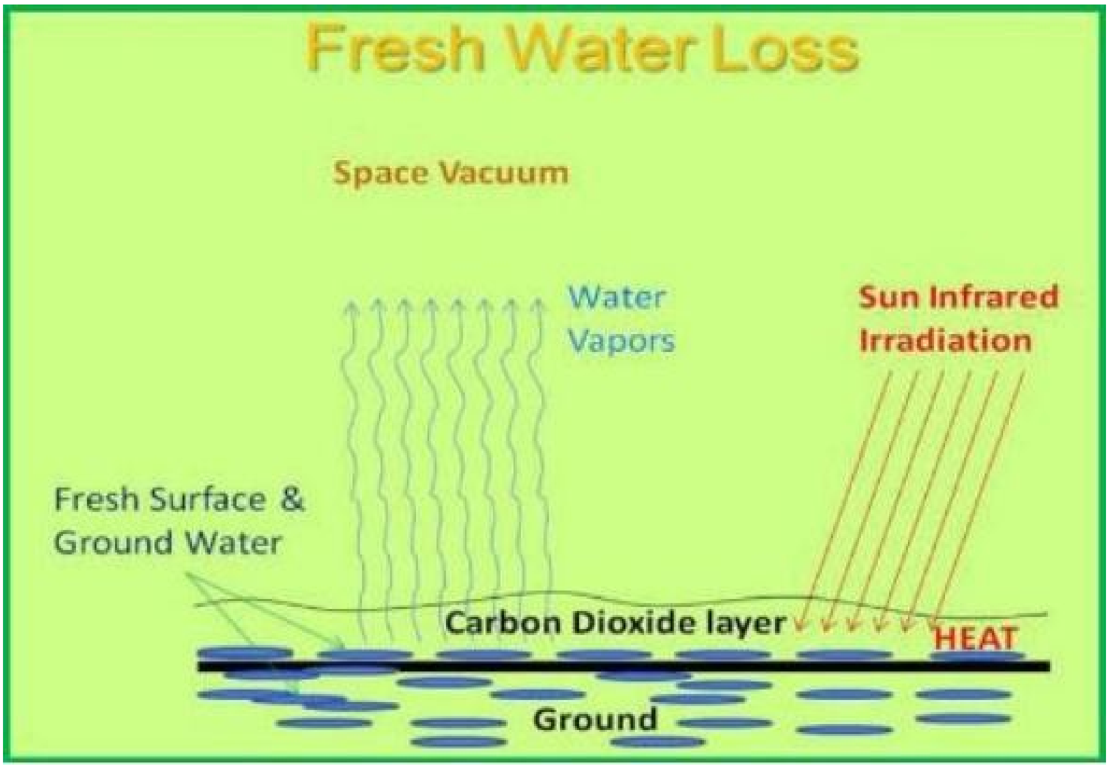

Fig. 2. Loss of fresh water from Earth to the Space vacuum due to the elevated air CO_2 concentrations [1].

The new concept of the new gas stations is shown in Fig. 3. As the readers might see the customers can simultaneously purchase not only the Carbon Negative Gasoline replacement fuel Isobutanol or its mixture with the fuel DAA (80% vol/vol fuel Isobutanol and 20% of DAA), but also save lots of their time by combining the Carbon Negative Gasoline purchase with the purchase of the foods for home cooking and the chemicals for the household use. Anticipated in the next coming 10-25 years shortage of the fresh water is responded herein by the sales of the distilled water on the new gas stations. We sincerely anticipate that this type of the new gas stations will be distributed Nationwide and will replace the existing gas stations with only gasoline or diesel fuel and foods for consumption in the cars while driving. Resulting time saving due to the now new to visit also the Walmart or other stores is substantial and we trust this will lead to the new business opportunities for the Author’s business holding. We are thoroughly working on the issue of distilled water production in the amounts suitable fro body washing and the laundry pursposes. However, when the fresh water shortage will hurt the humankind, there will be raising the number of companies selling disposable one time use clothing and plenty of the supplies fro that. Imagine the time to empty the pockets of the single use clothing and fill in the pockets of the new disposable clothing with the things normally customers carry with them.

It is necessary to note herein that the anticipated relatively soon shortage of the fresh water is compensated by selling of the distilled water in the new type of the gas stations. The question of the use of the distilled water originated from the distillation of the sea water for washing of our bodies and for the laundry is not discussed or presented in pictures herein. We will discuss this topic in some other our future publications. We also plan to introduce the ordering in person and on-line ordering of the goods not regularly sold at the new type of the gas stations. This option will be just the one customers now have at the Walmart and other stores.

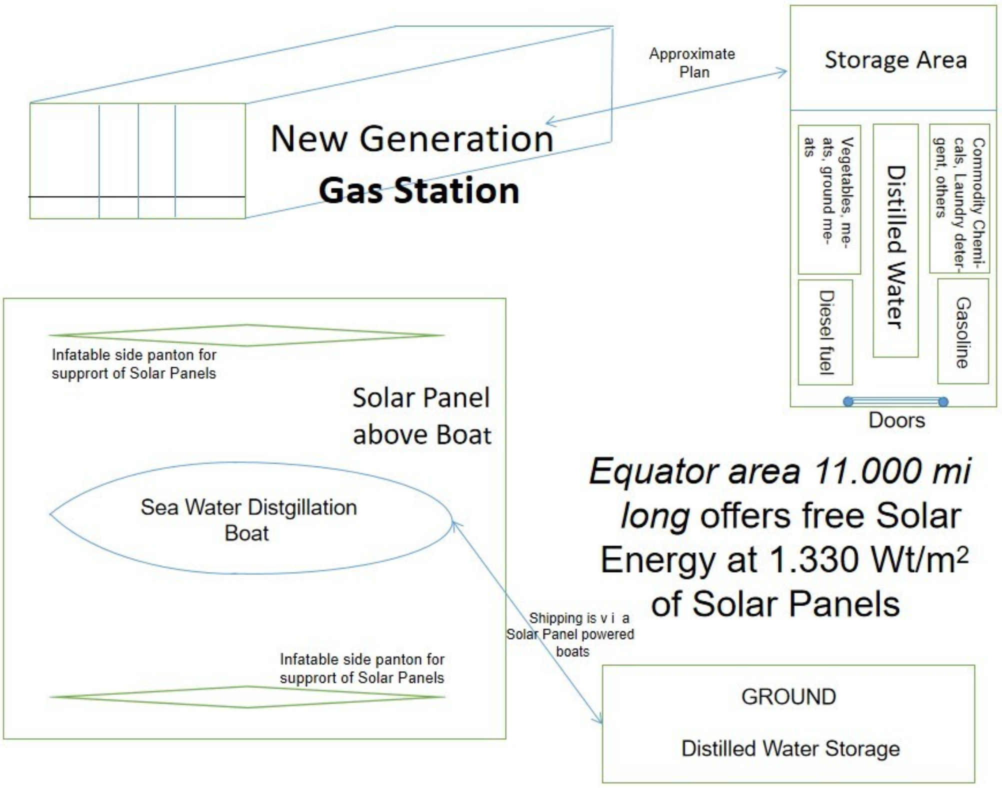
New Generation
Gas Station
Approximate Plan
Storage Area
Vegetables, meats, ground meats
Distilled Water
Commodity Chemicals, Laundry detergent, others
Diesel fuel
Gasoline
Doors
Infatable side panton for supprort of Solar Panels
Solar Panel above Boat
Sea Water Distgillation Boat
Equator area 11.000 mi long offers free Solar Energy at 1.330 Wt/m² of Solar Panels
Shipping is v i a Solar Panel powered boats
Infatable side panton for supprort of Solar Panels
GROUND
Distilled Water Storage

Fig. 3. The new type of gas station.

At the top of Fig. 3 you could see the new type of the gas station. In the new type of the gas station plan presented at the right top corner of Fig. 3 you could see the storage area where the ordered goods will be stored along with the regular inventory of the gas station. At the bottom of Fig. 3 in the left corner you could see the sea water distillation boat producing the bottled distilled water from the sea water in the Earth equatorial area. Said distilled water will be stored on the Ground and transported to storage by the solar panels powered boats with the DC motors the Author plans to purchase from the US shipyards from the decomposed submarines. During the anticipated 24/7/365 operation cycle the night time operation of said boats will be powered by the alakaline batteries the Author plans to purchase at the same shipyards from the decomposed submarines. Typically they are long lasting life batteries normally serving for about 30 + years from the date of purchase at the shipyard. The question still is of the availability of the distilled sea water for laundry and washing of human bodies and it is still in the discussions with my corporate employees and the corporate investors. I currently trust the solution might be to place the distillation factory in the equatorial area of the African continent and make said distilled water transported by railroads, ships and air force where that will be possible depending on the local circumstances there. Again, the source of the fresh water for the distillation process is the sea / ocean. Significant savings might be made by using of the DC motors from the shipyards powered by the solar panels and such solar panels will simultaneously charge the alkaline batteries for the overnight operations as above.

We would like to add the notes per the use of Carbon Negative fuels for powering Diesel engines. The known diesel fuel originated from petroleum has the carbon change range of 10_{10}-$10_{15.}$ We also would like to increase the length of the carbon chain of certain biofuels for the diesel trucks powering. Thus Carbon Negative fuel n-Butanol [24] condensation offers the longer length of the resulting biofuels as Fig. 4 shows.

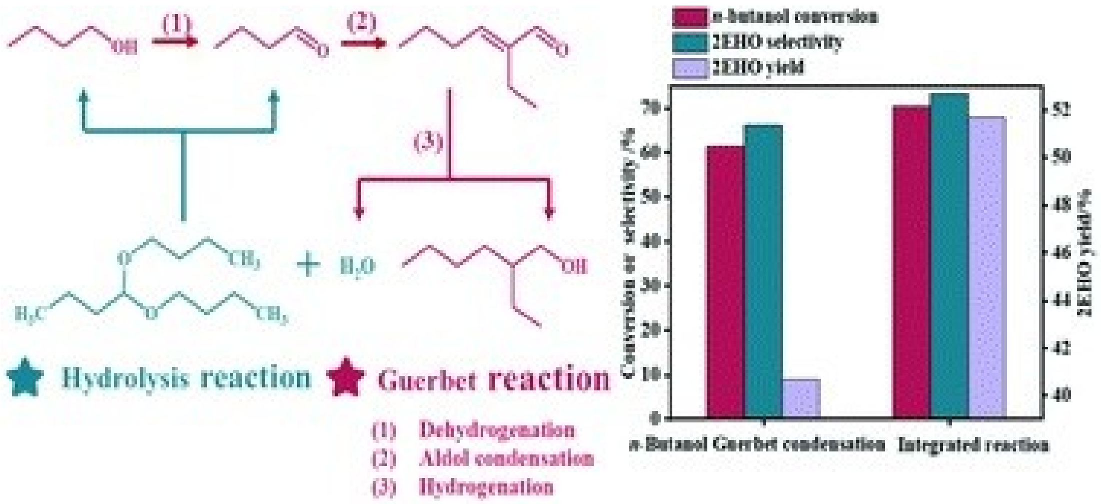

Fig. 4. Carbon Negative fuel n-Butanol Guebert condensation to increase the length of the resulting Carbon Negative component 1,1-dibutoxybutane of the Diesel fuel [23].

Hopefully such component of the Carbon Negative Diesel fuel will be also consumed well by the valued our customers.

Materials and Methods

Sequencing of the isolated genomic DNA from recombinant strains of Acetogens was conducted by the methods and procedures used for the customer DNA sequencing by the business Illumina in San-Diego, CA [15,17]. The metabolic engineering of the Acetogen biocatalyst to manufacture acetone from the air CO_2comprised inactivation of phosphotransacetylase via integration of a cassette comprising synthetic genes *erm*(B), thiolase and HMG-CoA synthase. Acetaldehyde dehydrogenase was inactivated via integration of a cassette consisting of synthetic genes *cat*, HMG-CoA lyase and acetoacetate decarboxylase.

Resulted Carbon Negative fuel DAA was successfully used in both Gasoline consuming 2001 Toyota Camry and the diesel fuel consuming 2020 Chevrolet Silverado 2500HD High Country Crew Cab 4WD for 20,000 miles each car. Certified mechanics from the Toyota and Chevrolet dealerships were invited to the corporate garage of our corporations to meticulously check stated cars driving and mechanical damages, especially in thew engine compartments.

Development of Carbon Negative Foods.

The genetic engineering of the fungi performed as described before for the genetic engineering of the Acetogens-biocatalysts

At the first step the Author has eliminated fungi genes not essential for the fungi maintenance and propagation [1]. At the second step of genetic engineering of fungi is the cloning in fungi of the recombinant genes of lamb and other animals (not listed herein) or tomatoes, potatoes, cabbage, bread and spice. Said genetically engineered fungi will be cultivated in the sterile environment at the corporate site.

The special care will be taken about the contracting capabilities of the genetically engineered muscle tissues allowing the muscle tissues of said genetically engineered creatures to grow as the natural muscle tissue has to grow with the training of the muscle owners.

Genetically engineered meats.

The Author trusts that his energy and cell components carbon negative system developed recently for the engineered Acetogen Biocatalysts should work well without any complications in genetically engineered fungi (the species has to be determined yet) containing the genes of lamb structures as thought originally should work without any problems in genetically engineered fungi (the species has to be determined yet) containing the genes of meat production. Original thinking of the Author was about the lamb originated genes, but that might change at the level of operations. A variety of genes encoding various meat structures must be engineered to add the smell and the feeling at the teeth during chowing the exact feeling of the meat structures consumed. Like the sensation of cracking the rib, cartilage, etc.

The special care will be taken about the contracting capabilities of the genetically engineered muscle tissues allowing the muscle tissues of said genetically engineered creatures to grow as the natural muscle tissue has to grow with the training of the muscle owners.

Genetically engineered tomatoes, potatoes, cabbage, etc.

The Author trusts that the energy generation and cell components structures creation could be produced by the carbon negative system developed recently for the engineered Acetogen Biocatalysts [2-10] should work well without any complications in genetically engineered fungi (the species has to be determined yet) containing the genes of respective vegetables production. The Author eventually will not be able to provide the exposure to the Sun light and the fresh air of said genetically engineered tomatoes, potatoes, cabbage and other vegetables which have to be maintained under the sterile conditions over the lifetime of the genetically engineered fungi-based systems.

Genetically engineered bread and bread-based products

The Author trusts that the energy and cell components Carbon Negative systems developed recently for the engineered Acetogen Biocatalysts should work well without any complications in genetically engineered fungi (the species has to be determined yet) containing the genes of respective bread and bread-based products production. The Author has to engineer and design the system for baking of said Carbon Negative genetically engineered bread and bread-based products. Eventually there will be certain problems with not properly cooked genetically engineered bread and bread-based products.

Genetically engineered Spices

The Author has given great thought about spices. Any food especially genetically engineered one has to have salt and spices. The Author did not think about the genetic engineering of salt, it has to be available with no limitations. But genetically engineered spices based on pepper and other components used to produce spices have to be engineered. The Author trusts that the energy and cell components Carbon Negative system developed recently for the engineered Acetogen Biocatalyst should work well without any complications in genetically engineered fungi (the species has to be determined yet) containing the genes of respective genetically engineered pepper and other components giving the taste of spices.

The salt will be added to such genetically engineered spices as the powder which can be sterilized as usually to get into the sterile genetically engineered environment, or there will not be any need for that.

Results

The Author was really surprised when all his planned herein experimental parts with the carbon negative replacement of Gasoline and Diesel fuel worked as described before [3].

Data on testing of the Carbon Negative fuel using real Gasoline and Diesel fuels vehicles. Results on no any visible defects or vehicles misbehavior while driving

The certified mechanics from the respective car dealerships meticulously tested the respective corporate cars at the corporate manufacturing site and drove said cars on the roads nearby the manufacturing site meticulously to reveal any damages caused by the replacement of the Gasoline or the Diesel fuel by the suggested mixture of fuel DAA. The cars were placed on the treadmill with the device to check the engine emissions.

No unusual emissions in the cars exhausts

No unusual engine emissions were noted by said mechanics for all tested corporate cars. Then the mechanics made the test drives of the each said vehicle. No any mechanical or any other damages to the engines of the all said cars were ever revealed upon said thorough testing. Test drives of each said vehicle by the certified mechanics did not reveal any abnormal driving behavior in any of said cars. The mechanics still did not make any further recommendations on the following use of the Gasoline and the Diesel fuel replacement leaving for the Author the possibility of reporting this very good news to the general public. The gas mileages of the cars used to test the carbon negative fuel DAA as the replacement of Gasoline were 37 mpg on the highway and 31 mpg in the city of Brownsville. You can easily calculate the average gas mileage from said numbers. But the overall picture looks to us very promising since the gas mileage even slightly exceeded the Gasoline from petroleum use mileage in Toyota Camry. Due to the limited number of the tested cars we cannot make any predictions for the other car makes and the cars made before the year of 2020. This will become the risk of the other car owners, who will decide to replace their gasoline with the produced from the air CO_2 mixture of fuel DAA. If you remember our corporate goal is to replace all the petroleum use by the use of the air CO_2, initially to resolve the issue of the transportation problems, substantially increasing the air CO_2 content via the air CO_2 accumulation and eventually to decrease the air CO_2 content causing the fresh water loss to the outer Space vacuum as stated before.

Fuel efficiency of the new carbon negative replacement of the Gasoline

The new gas stations selling carbon negative DAA along with the genetically engineered foods and normal foods for homer cooking of the customers showed pretty much promising tendencies of improved sales of both the carbon negative fuel and the foods, both genetically engineered and regular. Apparently customers really appreciated the opportunity to save their time while visiting said new version of the gas stations selling also foods for the households. Saving of the customers time was our primary priority and the new route to improve sales of the carbon negative fuels. Basically we have reached our goal; the new kind of the gas stations will probably replace the existing gas station selling only snacks and Gasoline and Diesel fuel manufactured from petroleum.

Discussion

As we have mentioned before in the Introduction section this new kind of the gas stations serves to improve the quality of life of life of the urban customers. It is very likely that the customers residing in the country side will also prefer this kind of the new gas stations and eventually they will prefer the carbon negative fuel DAA as the paramount goal we have set originally in our war with the international petroleum corporations which SHELL has started from the attempted murder of the Author (the Houston Police report is available for reference). This is the intelligent response of the Author to the attempt to kill the Author who eventually looks like immortal after the KGB attempted to kill him in the Russian Federation two times in 1992 and in 1997. We eventually will continue and introduce new Carbon Negative fuels and new genetically engineered food for the consumption of our customers.

The new Carbon Negative fuels demonstrated themselves they were serving as the petroleum-based Gasoline and Diesel fuel. Imagine that if that would be possible to convince the readers that the Carbon Negative fuels are as good as the fuels - products of the petroleum distillation at the refineries owned/rented by the international petroleum corporations and which the customers used before the new Carbon Negative fuels - then this is the natural result, the replacement of the old gas stations selling expensive fuels originated from petroleum by the new type of the gas stations as the Author offers herein and his Carbon Negative fuels at the price everybody will like ($2.65-$2.87 per gallon). Then the outcome of the Author’s attempted murder committed by SHELL, the international petroleum corporation, will be the response of the Author to said federal crime - the replacement of the international petroleum corporations by the corporations producing Carbon Negative fuels and genetically engineered food along with the abundance of the distilled water. This is the main rule of the market economy in the US. God bless the market economy and God bless the USA which will be among the first in the World replacing the petroleum originated fuels by the Carbon Negative fuels. The Author’s task will be to become the main person manufacturing his Carbon Negative fuels and genetically engineered foods along with the distilled water. The manufacture of the distilled water from the sea / ocean waters for its use fro the laundry purposes is the main question for the Author now to be resolved with the attraction of the new inverstors to his multiple projects.

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Chapter 3. Carbon Negative Gasoline and Diesel fuel replacements

Abstract

Petroleum recovery from the Ground and its distillation to get Gasoline and Diesel fuel burned in Gasoline and Diesel cars / trucks, airjets, etc. leads to the Global Environmental Catastrophe in 10-15 years from now which the humankind will not survive. The Author plans to save the Earth’s fresh water by developing Nationwide manufacture of the Carbon Negative replacements of Gasoline and Diesel fuel and add additional distilled water and the genetically engineered foods to help the humankind pass said .environmental crisis. The Author plans to raise additional investor’s money to organize Nationwide network of the new type of gas stations selling not only Carbon Negative fuels but additionally to that the foods for home cooking and essential household items to save time to the valued customers preventing them to drive additionally to Walmart and grocery stores. The ordering system to provide additional goods is also planned. The environmental problem outlined has the solution: elimination of international petroleum corporations and their change to Carbon Negative corporations.

Key words: Carbon Negative fuels; additional distilled water from sea water; genetically engineered Carbon Negative foods; new type of the gas stations; the ordering system for the new type of gas stations.

1. Introduction

Recent changes at the top of the US Executive administration have been combined with the not very wise decisions to cut down the petroleum imports from the Russian Federation. The free market economy of the US immediately reacted by skyrocketing of the Gasoline and the Diesel fuels prices at the gas stations to the levels affecting all other prices nationwide. For instance the cost of the TX DL skyrocketed from $11 USD to $33 USD (the coefficient of recalculation all the prices this year vs. year of 2021 and below ghat year is up to 3 and above - the rule of the market economy). That coefficient 3 and above 3 is typical for the increase of other prices Nationwide as the major price-wise rule of the free market economy [21]. Subsequently, the proper running of the US economy is possible only with the very wise decisions of the top of governmental administration. We offer herein the carbon negative replacements of the Gasoline and of the Diesel fuel manufactured from petroleum by the same fuels manufactured from the air CO_2. Nationwide replacement of the technologies based on the use of petroleum as the source of chemicals or the fuels manufactured by the carbon negative technologies is absolutely essential since the Earth has passed the level of the air CO_2 400 ppm, the “Point of No Return” per the NASA discoveries of 2010 [21]. Now the air CO_2 exceeds 450 ppm 51.and goes up based of the wide distribution of the intensive transportation based on the use of petroleum-derived Gasoline and Diesel fuel [21].

The Author has written much about the Carbon Negative replacements of Gasoline or Diesel fuel manufactured by international petroleum corporations from petroleum via its distillation at the refineries the number of which is around 80 in the continental US and each of them operating produces a lot of air CO_2 [5-16,19]. Now there is the time to elaborate this topic.

The combustion energy of fuel butanol is represented by the following numbers for the isomers of fuel n-Butanol shown below as indicated in [6,7]: 1-Butanol: −2.671 kJ/mol, 2-Butanol: −2.661.1 kJ/Mol, 62.Isobutanol: −2.662.6 kJ/Mol, Tert-butyl alcohol: −2.644.8 kJ/Mol. The combustion energy of Gasoline is slightly higher. It is around -3.200kJ/Mol 64.[6]. The combustion energy of DAA or Mesityl oxide is -3.600 kJ/Mol [6]. In addition to that the octane number of the most prosperous fuel Isobutanol is 98 [1,2].

Therefore, adding the fuel Isobutanol [18] to the mixture of other Carbon Negative fuels as above will substantially increase the overall summary octane number of said mixture. Besides that the viscosity of pure fuel Isobutanol and other isomers of fuel n-Butanol prevents it safe use at outside temperatures below 34°F [21]. That is why we offer this Carbon Negative mixture comprising 40% of fuel Isobutanol, 10% fuel n-Butanol, 72.30% Mesityl oxide [24,34,35] and 20% fuel Diacetyl alcohol (DAA) [15-17, 73.29]. This will eventually compete with the products of the international petroleum corporations originated from petroleum as we discuss below its causing the outlined environmental crisis related to the increase of the air CO_2 content [24].

The Mesityl oxide chemical formula is give in Fig. 1.

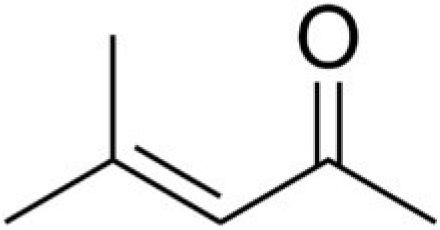


Fig. 1. Mesityl oxide [24,34,35].

Therefore, we have decided to sacrifice both corporate cars for the test driving them on the highway and in the city of Brownsville, TEXAS, to see if any damage could possibly happen to the cars, and especially their engines operated with the fuel isobutanol and other carbon negative fuels as above. The manufacturing price of the acetone manufactured from the air CO_2 is approximately $0.35 per gallon [3]. The condensation of the two acetone molecules over the alkaline catalyst per [4] gives fuel Diacetyl alcohol at the manufacturing cost of $0.02 per gallon. The combustion energy of the fuel Diacetyl alcohol is approximately -3.473 kJ/Mol as compared to the combustion energy of the Diesel fuel of -808 kJ/Mol which substantially exceeds the typical for the diesel fuel combustion engine energy release as the mechanical energy of driving and corresponds to the higher engine power under the given engine mechanical dimensions, probably because of the increase of the combustion mixture explosive pressure. Mesityl oxide combustion energy elevates that of the Diesel fuel, and we have decided to test the said mixture of the Carbon Negative fuels comprising as above 40% of fuel Isobutanol, 10% fuel n-Butanol, 30% Mesityl oxide [24,34,35] and 20% fuel Diacetyl alcohol (DAA) and that 98.mixture has been tested on the Diesel truck 2022 RAM 3500.

However, we are not the explosion experts to discuss this herein [5]. Indicated elevation of the explosive pressure in the case of using Diacetyl alcohol (DAA) and Metsityl oxide happens in the purchased manufactured diesel vehicles. This note is to keep checking the engine combustion chamber gaskets often to notice any damage by the qualified dealership mechanic or to notice sudden loss of engine power with the need to get the engine to the qualified dealership mechanic for repairs of damaged combustion chamber gaskets [6].

Biocatalysts used to manufacture the Carbon Negative fuels have different synthetic genes introduced by the means of genome tailoring using the unique Electrotrasformation / Electrofusion Generator developed by the Author when he still was in the Russian Federation [18,19]. Four carbon alcohol fuel n-Butanol and its isomers are widely recommended to replace Gasoline manufacture by the international petroleum corporations from petroleum. Said isomers of fuel n-Butanol are shown in Fig. 2.

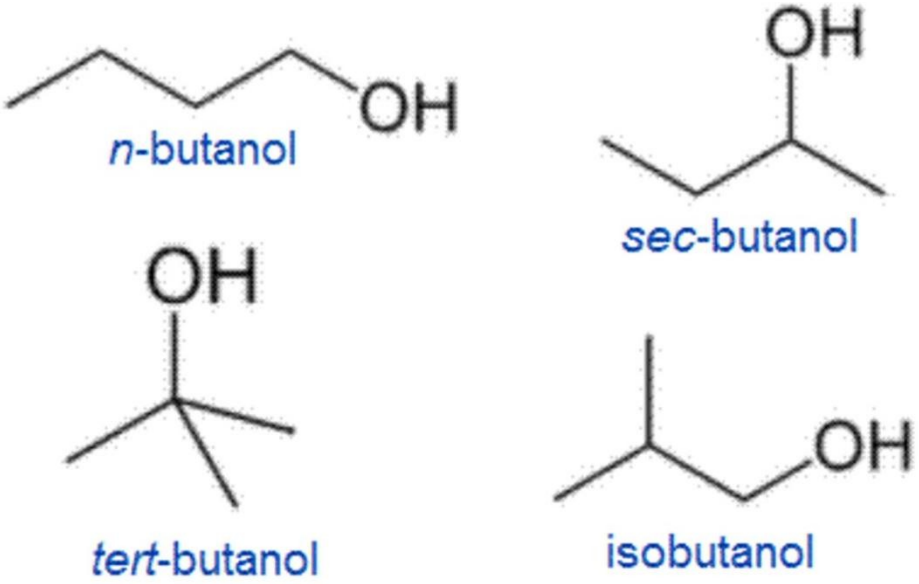


Fig. 2. Fuel n-Butanol and its isomers sec-Butanol, tert-Butanol and Isobutanol [20].

Our biocatalyst making fuel Isobutanol has several genetically engineered genes for that purpose [18,20]. The fuel Isobutanol bioisynthesis by this strain is shown in Fig. 3

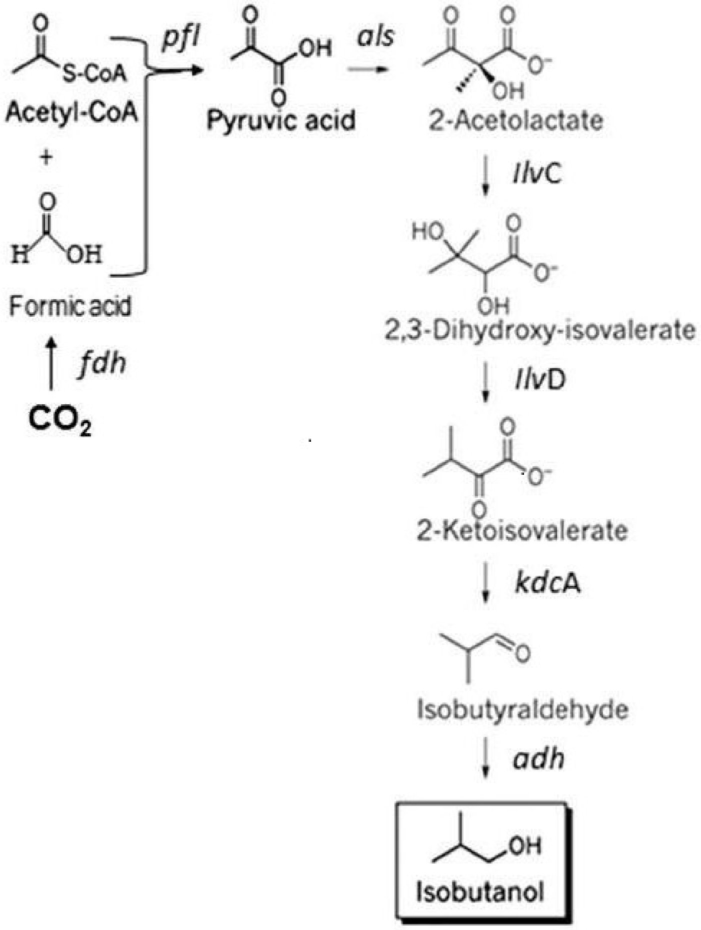


Fig. 3. Genetically engineered fuel Isobutanol pathway in our biocatalyst [18,20].

Fuel Isobutanol, the perfect Carbon Negative fuel, has a shortcoming bringing it to the zero use: high viscosity, tendency to form gel at temperatures below 0ºC (or 34ºF) [22,23]. The fuel Isobutanol has viscosity cP or mPa•s @ 20°C 3.102 [24]. Forming gel in the fuel line is absolutely not acceptable. The engines have to run perfectly at any reasonable temperatures. If in the State of TX the low temperatures are typical for only a few months, then in the Northern States the winter has low air temperatures for a much longer time. Therefore, there has to be the tool to eliminate the Gasoline viscosity to the levels acceptable at the low air temperatures below 0ºC. This remedy is found already. Mixing of 80 % (vol/vol) of Carbon Negative fuel Isobutanol with 20 % (vol/vol) of Diacetyl Alcohol (DAA), which we produce Carbon Negative from condensing of the two Carbon Negative acetone molecules over the alkalyne catalyst [25,26]. Let me go to the carbon negative fuels - Carbon Negative replacements of Gasoline and Diesel fuel manufactured from petroleum by the international petroleum corporations. Earlier we have published the Diacetone Alcohol (DAA) as the carbon negative replacement of the Gasoline and Diesel fuel. DAA might be produced by the condensation of the two Acetone molecules over the alkaline catalyst [4]. The explosion energy of DAA is way above the explosion energy of the Diesel fuel manufactured by the major international petroleum corporations from the petroleum [27,28]. Therefore, we have to pray that our customers will check their engines regularly with the qualified mechanics for the damages which potentially might be caused by the use of DAA in the existing trucks. Therefore the manufacturers of the diesel trucks will have to make certain changes to the design of their trucks to accommodate much higher explosion energy of added part of DAA. This might be unnecessary however their manufacturers have to acknowledge the massive use of the carbon negative Gasoline replacement and make certain changes improving the mechanical resistance of the gaskets in the engine compartment. Not to mention herein that the international petroleum corporations now spend $1.75 to manufacture 1 gallon of

Gasoline or 1 gallon of the Diesel fuel. That eventually affects the prices [of the Gasoline and the Diesel fuel manufactured from petroleum [6].

Fig. 4 explains how our Acetogen biocatalyst synthesized Carbon Negative fuel Acetone from the air CO_2 [29]. Resulting Carbon Negative fuel Acetone is used for the manufacture of DAA by the condensation of the two Acetone molecules over the alkaline catalyst [4].

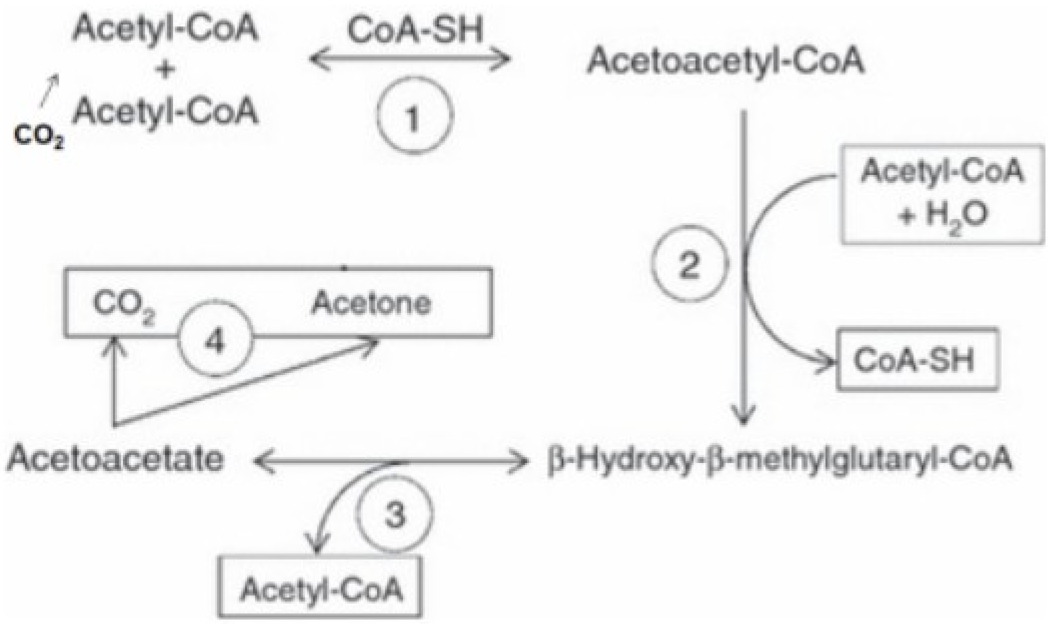


Fig. 4. Biosynthesis of fuel Carbon Negative acetone from the air CO_2 [29].

The following chemical reaction allows us make certain calculations per the Acetone yield [29]:

$$12\ CO_2 + 56\ H_2 = 3.6\ \text{Acetone} + 0.06\ \text{Cell Carbon}$$

Again, we have to note, that our manufacturing facility is the grid-independent, getting all the electric energy solely from the solar panels covering all the area over our bioreactors. We used our original not having any World’s analogs gas blend fermentation vessels [1,3,5,7-18]. The bottom of each vessel was covered with the gas Pall spargers providing the size of gas blend bells of around 0.5 micrometers. The overall fermentation work went extremely well with the high microbial densities of the genetically engineered strains of Clostridium sp. MT896 and of Clostridium sp. MAceT113 [29]. When the acetone reached the concentration of about 8 - 9 g/l in each fermentation block of our fermentation plant, the fermentation was deceased and the acetone was collected from the fermentation fluid. Evaporated acetone was collected and then subjected to the treatment under the alkaline catalyst per the US Patent 1550792A [4] to reach the production of the Diacetyl alcohol. At the concentration of the Diacetyl alcohol 97% it was collected, dehydrated from the trace amounts of water and used as the diesel engine fuel. So, now we are ready to offer to the customers the replacement of the diesel fuel, manufactured in the US solely from the air CO_2.

2. Materials and Methods

In this article we describe the bioreactors used to manufacture our Carbon Negative fuels. The image reflecting one of said bioreactors is shown in Fig. 5.

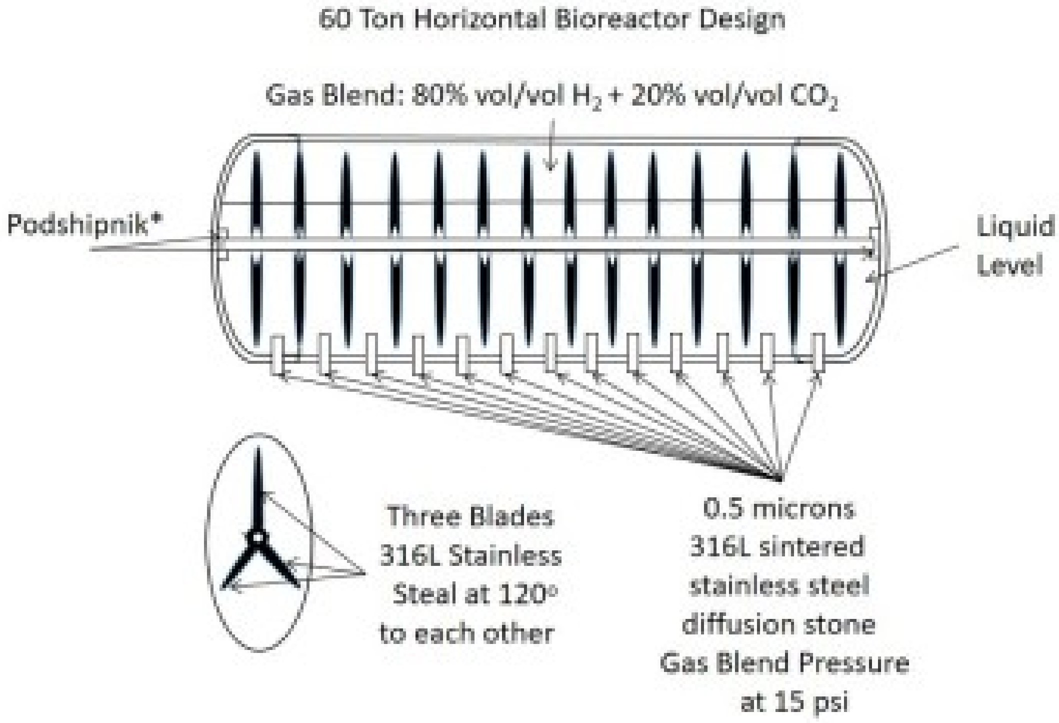

60 Ton Horizontal Bioreactor Design
Gas Blend: 80% vol/vol H2 + 20% vol/vol CO2
Podshipnik*
Liquid Level
Three Blades 316L Stainless Steal at 120° to each other
0.5 microns 316L sintered stainless steel diffusion stone Gas Blend Pressure at 15 psi

Fig.5. Our horizontal bioreactor design [30].

This is the modification of the known already horizontal bioreactor of

Beckman Coulter Life Sciences [11]. The idea is the same: the feed is gaseous like for growing of Algae cells [11]. However we grow the Acetogen biocatalysts in one set of bioreactor modules producing from the gas blend of H_2 and CO_2 (the gas blend we use has 80 % vol/vol of H_2 . and 20 % vol/vol CO_2 fuel Isobutanol [7-10, 2-16,19] and in the other set of said bioreactor modules to manufacture acetone [29].

As Fig. 5 shows, in our system we used 42 (14 per the length of the horizontal bioreactor, three by the "perimeter" (the 70% of the horizontal bioreactor are filled with the liquid medium), the total number of the impeller used is 42) s causing random distribution of the gaseous blend over the bioreactor volume we have used. Said gas blend was composed of 80% vol/vol H_2 and 20% vol/vol of CO_2. This is very important that said CO_2 was extracted from the surrounding air. The process of said $C0_2$ extraction is proprietary and we will describe it in our subsequent publication since we do not have enough money for the US patenting process and trust that the publications in the peer-reviewed Journals totally replace the related patents and have to be always overcome by the patents of competitors if any. The horizontal bioreactor shown in Fig. 5 has been filled by the nutrient medium by 67- 68%. The rest of the bioreactor space was for the used by us gas blend as above. It is important to note that each impellers used were composed of the properly balanced for the rotation three polished stainless 316S steel blades at the speed of 450 rpm. The pressure of the gas blend used in the horizontal bioreactor shown in Fig. 5 was 15 psi. The total number of said diffusion stones was 42 per each bioreactor we have used.

Fuel Isobutanol was manufactured using the genetically engineered biocatalysts per [18]. Diacetone Alcohol (DAA) was created from the Carbon Negative acetone manufactured before using the technology we have already described [29] by the condensation of the two Carbon Negative acetone molecules over the alkaline catalyst as described [29]. Said Carbon Negative fuel Isobutanol and DAA were used as the Carbon Negative fuels sold to the customers. In case of fuel Isobutanol its known high viscosity causing problems in fuel lines of the cars at low air temperatures if fuel Isobutanol was used pure were resolved as discussed before [6] by mixing of 80% vol/vol of fuel Isobutanol with 20% vol/vol of Carbon Negative DAA as described herein above. Said problem with elevated viscosity does not exist for the said mixture of the carbon negative fuels as above: 40% of fuel Isobutanol, 10% fuel n-Butanol, 30% Mesityl oxide [24,34,35] and 20% fuel Diacetyl alcohol (DAA).

It is important to note that the impeller blades were placed on a 316S stainless teal shift fixed in the horizontal bioreactor by the Podshipniks [31]. These are the specially designed and properly manufactured for handling and rotation elements providing long and productive life for shift with the impellers shown in Fig. 4 and used in the bioreactor. Podshipniks are shown in Fig. 4 and in Fig. 5.

Fig. 6. Podshipnik used in our horizontal bioreactor [Купить подшипник 30308 40*90*25,25 mcb в Украине, цена на Podshipnik.ua].

It is important to note that the Author was assassinated by SHELL after offering SHELL commercialization of his proprietary technology of Gasoline manufacturing from the air CO_2 (the Declaration of Interests Statement section of this original article). As the response the Author has came up with the proposition to displace the existing petroleum corporations operating in the USA by the corporations manufacturing Carbon Negative fuels from the air CO_2 in sincere Author's intent to bring the air CO_2 content to the level of the year 1900 or just before the active petroleum fields discovery and exploration followed by the distillation of petroleum in the refineries itself producing the air CO_2 [6].

It is also important to mention herein that the Carbon negative fuels were sold at the new type of the gas stations shown in Fig 3. below.

We have tested our Carbon Negative fuels of the set of corporate vehicles we have sacrificed for that purpose even without knowing the results of the testing performed but with the great hope that all said vehicles will survive said testing and will be used again but with only the Carbon Negative fuels. For said testing we have sacrificed corporate 270.2020 Toyota Camry, Peugeout 3008 and the diesel truck 2020 Chevrolet Silverado 1500 Duramax Diesel. The gas mileage in the town of Brownsville and on the highways was meticulously recorded by the respective chauffeurs. Certified mechanics from the Toyota, Peugeot and Chevrolet dealerships were invited to the corporate garage of our corporations to meticulously check 1)stated cars driving and 2) any mechanical damages, especially in the engine compartments, like gaskets on the engines anticipating damage of some of them after at least 10,000 miles of testing. The testing was performed for 20,000 miles for each test vehicle. The records on the gas mileage for all types of 280.tested cars are discussed herein.

We have mentioned that we sell our Carbon Negative fuels at the new type of the gas stations, combining 1) the sales of the Carbon Negative fuels and 2) the sales of the certain goods for which the valued customers had to drive additionally to Walmart and the grocery stores along with ordering (includes also the on-line ordering) of the goods the customers could not find at the new type of the gas stations but needed and had to drive to the next to the gas stations store to purchase them. In addition to that the new type of the gas stations was selling the bottled distilled water manufactured at our new type of business activity - the sea based set of solar panels powered boats for the distillation of the sea water. The new type of the gas stations was also used to sell to the valued customers - consumers of the Carbon Negative fuels the food for home cooking, not the prepared at the gas stations or ready to eat food sold at the old type of the gas stations. Our intent was to ensure the valued customers will find the new type of the carbon negative gas stations a valuable option to save their time for not visiting on their cars the Walmart and the grocery stores. Certain foods were prepared using the genetically engineered fungi (to be approved for the Nationwide use). We used the Ordering option for the goods not currently sold bu had to be added to save the time for our valuable customers. For that purpose the sales people took the orders and there was also the on-line ordering system.

Development of Carbon Negative Foods.

The genetic engineering of the fungi was performed as described before for the genetic engineering of the Acetogens-biocatalysts

At the first step the Author has eliminated fungi genes not essential for the fungi maintenance and propagation [4]. At the second step of 308.genetic engineering of fungi is the cloning in fungi of the recombinant genes of lamb and other animals (not listed herein) or tomatoes, potatoes, cabbage, bread and spice. Said genetically engineered fungi will be cultivated in the sterile evironment at the corporate site.

The special care will be taken about the contracting capabilities of the genetically engineered muscle tissues allowing the muscle tissues of said genetically engineered creatures to grow as the natural muscle tissue has to grow with the training of the muscle owners.

Genetically engineered meats.

The Author trusts that his energy and cell components Carbon Negative system developed recently for the engineered Acetogen

Biocatalysts should work well without any complications in genetically engineered fungi (the species has to be determined yet) containing the genes of lamb structures as thought originally should work without any problems in genetically engineered fungi (the species has to be .determined yet) containing the genes of meat production. Original thinking of the Author was about the lamb originated genes, but that might change at the level of operations. A variety of genes encoding various meat structures must be engineered to add the smell and the feeling at the teeth during chowing the exact feeling of the meat structures consumed. Like the sensation of cracking the rib, cartilage, etc.

The special care will be taken about the contracting capabilities of the genetically engineered muscle tissues allowing the muscle tissues of said genetically engineered creatures to grow as the natural muscle tissue has to grow with the training of the genetically engineered said 333.muscle owners - genetically engineered muscle fibers.

Genetically engineered tomatoes, potatoes, cabbage, etc.

The Author trusts that the energy generation and cell components structures creation could be produced by the carbon negative system developed recently for the engineered Acetogen Biocatalysts [6-18] should work well without any complications in genetically engineered fungi (the species has to be determined yet) containing the genes of respective vegetables production. The Author eventually will not be able to provide the exposure to the

Sun light and the fresh air of said genetically engineered tomatoes, potatoes, cabbage and other vegetables which have to be maintained under the sterile conditions over the lifetime of the genetically engineered fungi-based systems.

Genetically engineered bread and bread-based products

The Author trusts that the energy and cell components Carbon Negative system developed recently for the engineered Acetogen Biocatalysts should work well without any complications in genetically engineered fungi (the species has to be determined yet) containing the genes of respective bread and bread-based products production. The Author has to engineer and design the system for baking of said genetically engineered bread and bread-based products. Eventually there will be certain problems with not properly cooked genetically engineered bread and bread-based products.

Genetically engineered Spices

The Author has given great thought about spices. Any food especially genetically engineered one has to have salt and spices. The Author did not think about the genetic engineering of salt, it has to be available with no limitations. But genetically engineered spices based on pepper and other components used to produce spices have to be engineered. The Author trusts that the energy and cell components Carbon Negative system developed recently for the engineered Acetogen Biocatalyst should work well without any complications in genetically engineered fungi (the species has to be determined yet) containing the genes of respective genetically engineered pepper and other components giving the taste of spices. The salt will be added to such genetically engineered spices as the powder which can be sterilized as usually to get into the sterile genetically engineered environment, or there will not be any need for that.

Results

The Author was really surprised when all his planned herein in this original article experimental parts worked well as described before [7-10, 12-14] with the Carbon Negative replacement of Gasoline and Diesel fuel.

Data on testing of the carbon negative fuel using real Gasoline and Diesel fuels vehicles. Results on no any visible defects or vehicles misbehavior while driving

The certified mechanics from the respective car dealerships meticulously tested the respective corporate cars at the corporate manufacturing site and drove said cars on the roads nearby the manufacturing site meticulously to reveal any damages caused by the replacement of the Gasoline or the Diesel fuel by the suggested mixture of fuel Diacetyl alcohol (80% v./v.) and Fuel Isobutanol (20% v./v.). The 40% of fuel Isobutanol, 10% fuel n-Butanol, 30% Mesityl oxide [24,34,35] and 20% fuel Diacetyl alcohol (DAA) to power the Diesel truck 2022 RAM 3500. The cars were placed on the treadmill with the device to check the engine emissions. No unusual exhaust gas emissions were ever tested and discovered in the exhaust gas of all tested vehicles.

No unusual emissions in the cars exhausts

No unusual engine emissions were noted by said mechanics for all tested corporate cars. Then the mechanics made the test drives of the each said vehicle. No any mechanical or any other damages to the engines of the all said cars were ever revealed upon said thorough testing. Test drives of each said vehicle by the certified mechanics did not reveal any abnormal driving behavior in any of said cars. The mechanics still did not make any further recommendations on the following use of the Gasoline and the Diesel fuel replacement leaving for the Author the possibility of reporting this very good news to the general public. The gas mileages of the cars used to test the mixture of fuel Diacetyl alcohol (80% v./v.) and fuel Isobutanol (20% v./v.) or the mixture as we stated above40% of fuel Isobutanol, 10% fuel n-Butanol, 30% Mesityl oxide [24,34,35] and 20% fuel Diacetyl alcohol (DAA) as the replacement of Gasoline were 37 mpg on the highway and 31 mpg in the city of Brownsville. You can easily calculate the average gas mileage from said numbers. But the overall picture looks to us very promising since the gas mileage even slightly exceeded the Gasoline from petroleum use mileage in Toyota Camry and Porshe Cayenne Turbo. Due to the limited number of the tested cars we cannot make any predictions for the other car makes and the cars made before the year of 2020. This will become the risk of the other car owners, who will decide to replace their gasoline with the produced from the air CO_2 mixture of fuel Diacetyl alcohol (80% v./v.) and fuel Isobutanol (20% v./v.). If you remember our corporate goal is to replace all the petroleum use by the use of the air CO_2, initially to resolve the issue of the transportation problems, substantially increasing the air CO_2 content via the air CO_2 accumulation and eventually to decrease the air CO_2 content causing the fresh water loss to the outer Space vacuum as stated before. The similar picture was seen if we used said mixture 40% of fuel Isobutanol, 10% fuel n-Butanol, 30% Mesityl oxide [24,34,35] and 20% fuel Diacetyl alcohol (DAA) to fuel the Diesel truck 2022 RAM 3500: highway mileage 37 mpg, town mileage 35 mpg for the long testing time of 20,000.

Fuel efficiency of the new carbon negative replacement of the Gasoline and Diesel fuel

For the use of said mixture of fuel Diacetyl alcohol (80% v./v.) and fuel Isobutanol (20% v./v.) as the Diesel fuel replacement for over the 20,000 miles runs, the 10,000 miles old 2020 Shevrolet Silverado1500 truck was used for test runs on our carbon negative Diesel fuel for 20,000 miles.. The Diesel fuel mileage was achieved on the highway at the average diesel fuel mileage ~38 mpg, and at ~32 mpg driving in the city. The calculated the combined driving efficiency was about ~36 mpg. The Author does not take any risk in forecasting the Diesel fuel mileage behavior of the other diesel cars/trucks makes and per the mileage forecasting for the Diesel cars/trucks makes older than the year of 2020.

Discussion

NASA has stated in 2010 after measuring the air CO_2 content above 400 ppm that that was the "*Point of No Return*" to healthy environment on the Earth. Now the air CO_2 level exceeds 450 ppm. What that means and how do we pan to reduce the air CO_2 content to the level we have in our dreams - the air CO2 level of the year 1900 or just before the active discovery of the oil wells and fields and the massive petroleum production and use fore distillation to manufacture Gasoline and Diesel fuel by the international petroleum corporations.

The air CO_2 is the heaviest gas of the air gas blend having density of 1.22 $g/m^{3.}$ Air CO_2 density exceeds 1.97 $g/m^{3.}$ Therefore by the gravity force the air CO_2 is covering the Ground. The Ground is the natural refuge for all kinds of fresh water: fresh water from rains, snow/ice melting, etc. The ground is the place where from the creeks, rivers start from to go to the sea, lakes and ponds. With the air CO_2 excessively covering the Ground it produces much more fresh water vapors as that was in the year of 1900. In the Southern States of the US the temperature of the Ground reaches 100 ^{o}C and up. The fresh water trapped in the Ground might even boil increasing the evaporation of the fresh water vapors to the air. The air is attached to the Ground by the gravity force. The average thickness of the air layer above the ground is only 400 miles. The other end of said air layer is the outer Space vacuum. In 2010 NASA has found a lot of ice on the dark surface of the Moon. NASA has concluded that ice was captured by the dark surface of the Moon (-293°C) and the fresh water vapors came form Earth. The Moon worked as the “cold trap” for said vapors. Compare diameters of earth and the Moon, thinking that the Moon is located in 200,000 miles distance from Earth.

What that means? Earth is wasting its fresh water to the outer Space. How to stop it? This might be stopped by the stopping the air CO_2 production. For that purpose we have developed our Carbon Negative fuel and food corporations and manufacture the Carbon Negative fuels. Therefore we are offering the Carbon Negative fuels instead of the widely used Gasoline and Diesel fuel manufactured by the international petroleum corporations from petroleum on the over 80 in the continental US refineries and sold to customers Nationwide.

The described for the Acetogen biocatalysts new type of the horizontal bioreactor design has the three gas blend diffusion stones per the perimeter of the bioreactor to ensure the even distribution of the feeding Acetogen biocatalysts with the gas blend components. The total number of said diffusion stones was per each bioreactor. They are located evenly with three inches apart from each other solely in the liquid part of the horizontal bioreactor. Fig. 1 has the only one of said diffusion stones, but the horizontal bioreactor for the manufacture of the Carbon Negative fuels has three at the perimeter of the immersed to the medium part three inches apart from each other with the total number of said stones Thirty Nine [30].

The Author suggests his own Carbon Negative fuels sold at the new type of gas stations shown in Fig. 7.

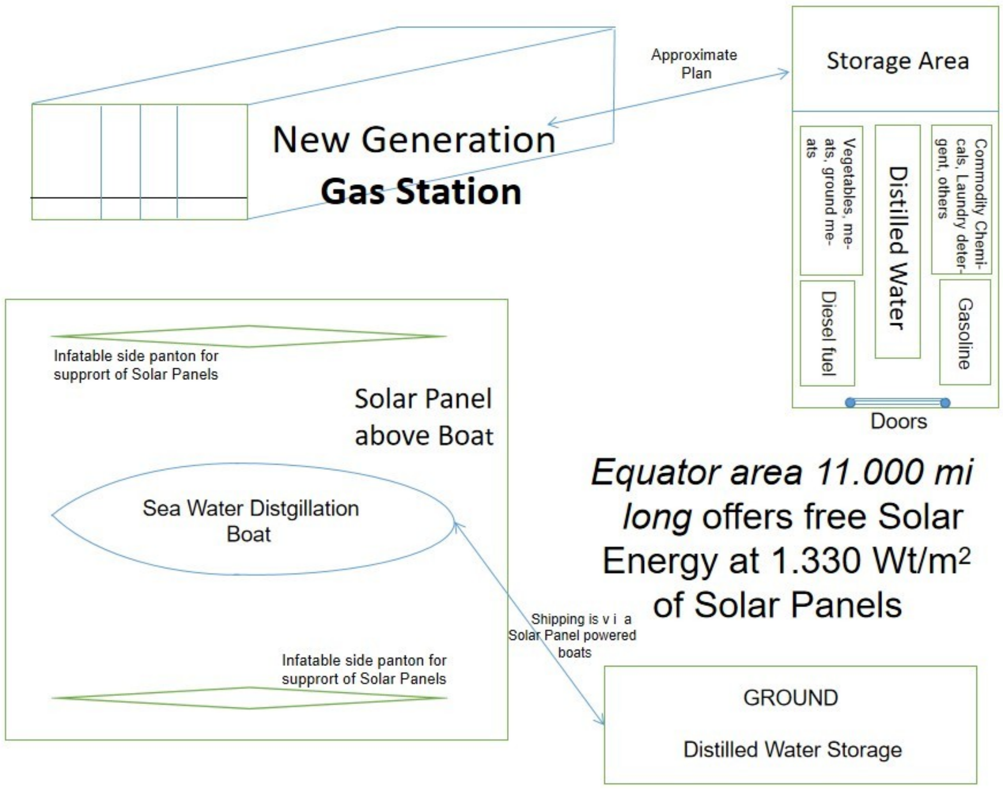
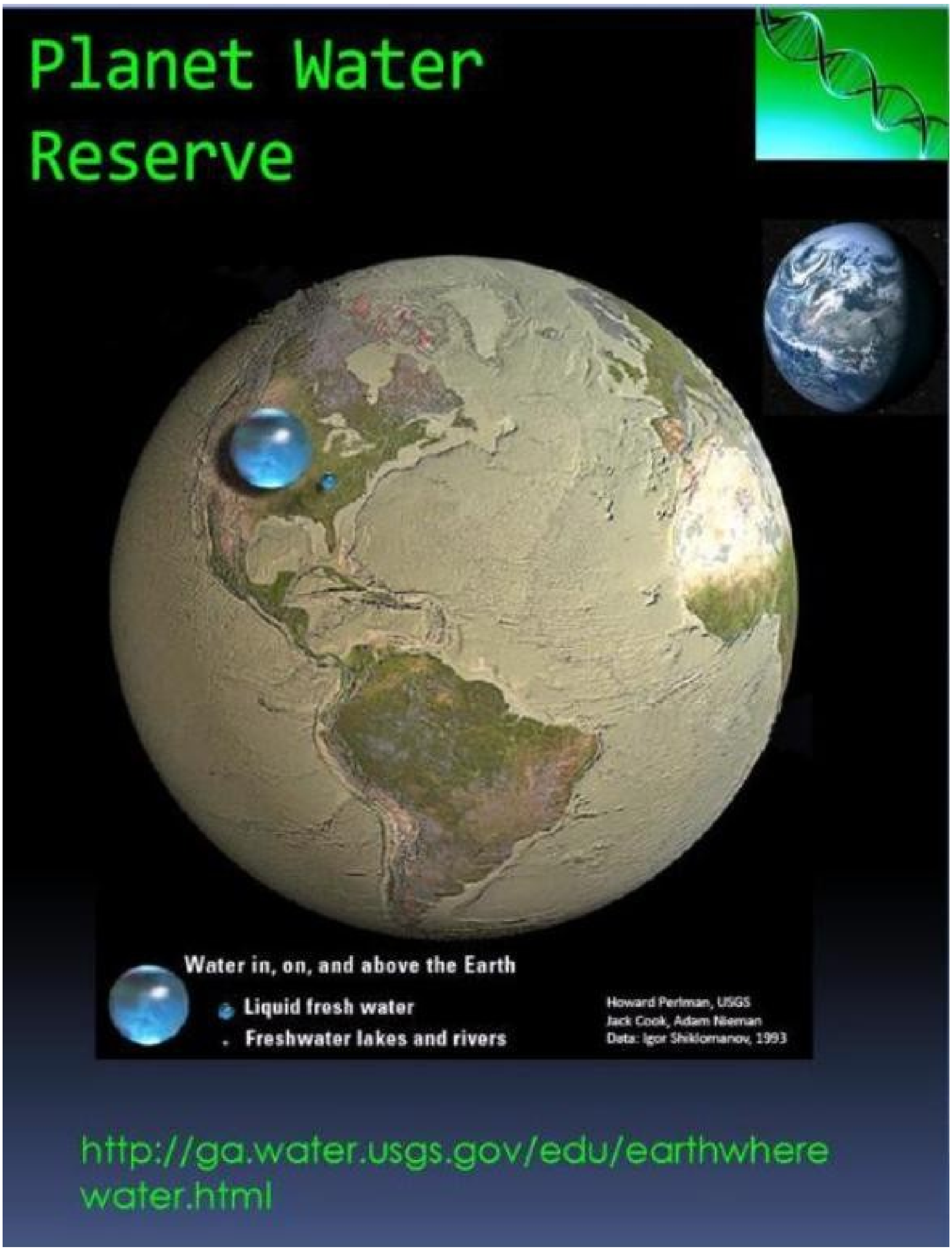

New Generation
Gas Station
Approximate Plan
Storage Area
Vegetables, meats, ground meats
Distilled Water
Commodity Chemicals, Laundry detergent, others
Diesel fuel
Gasoline
Doors
Infatable side panton for supprort of Solar Panels
Solar Panel above Boat
Sea Water Distgillation Boat
Infatable side panton for supprort of Solar Panels
Equator area 11.000 mi long offers free Solar Energy at 1.330 Wt/m2 of Solar Panels
Shipping is v i a Solar Panel powered boats
GROUND
Distilled Water Storage

Fig. 7. New type of the Carbon Negative fuels gas station offered herein.

The new gas stations (Fig. 7) selling Carbon Negative DAA and the Carbon Negative mixture as we noted above: 40% of fuel Isobutanol, 10% fuel n-Butanol, 30% Mesityl oxide [24,34,35] and 20% fuel Diacetyl alcohol (DAA) [15-17, 29] along with the genetically engineered foods and normal foods for home cooking of the customers showed pretty much promising tendencies of the improved sales of both the carbon negative fuel and the foods for the home cooking and consumption. Additionally said gas stations will sell to the customers the chemicals widely used by the household - and this all just to save the valuable time for the valuable customers. Apparently customers really appreciated the opportunity to save their time while visiting said new version of the gas stations selling also foods for the households. Saving of the customers time was our primary priority and the new route to improve sales of the carbon negative fuels. Basically we have reached our goal; the new kind of the gas stations will probably replace the existing gas station selling only snacks and Gasoline and Diesel fuel manufactured from petroleum.

Actually, said above the new type of the gas stations along with the offered there Carbon Negative fuels is the delicate response of the Author to SHELL with its attempted murder of the Author of this original article in response to the Author's offer to SHELL go start the manufacture of the Carbon Negative fuels.

We are concerned about the amount of the fresh water reserves on Earth. Fig. 8 shows the Governmental data on that [33]. Fig. 9 elaborates these data.



Planet Water Reserve

Water in, on, and above the Earth

Liquid fresh water

Freshwater lakes and rivers

Howard Perlman, USGS
Jack Cook, Adam Nieman
Data: Igor Shiklomanov, 1993

http://ga.water.usgs.gov/edu/earthwherewater.html

Fig. 8. Fresh water reserves of Earth [33].

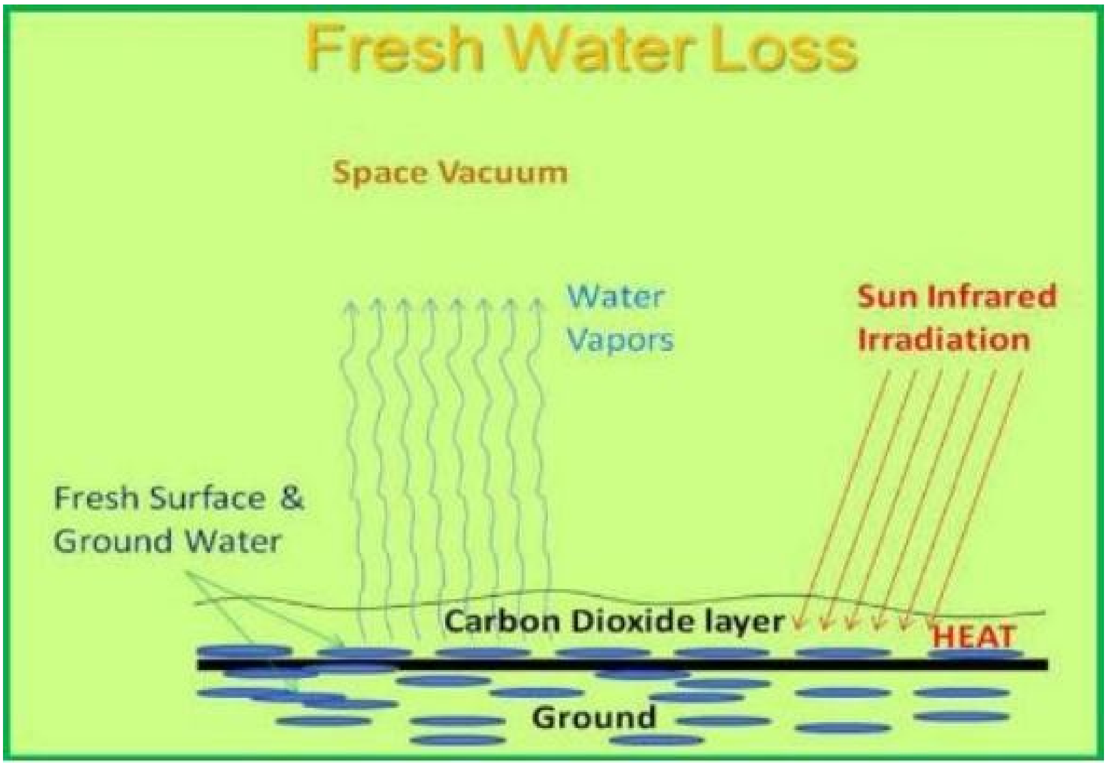


Fig. 9. Loss of fresh water from Earth to the Space vacuum due to the elevated air CO_2 concentrations [6,21].

The Author came to Houston in 1998. He was pleased by the Houston warm weather and always blue bottomless sky. Just in passed from that 26 years the Houston weather has changed. There is rain almost every day now. Rain is good as more fresh water comes to the Ground. However we need to realize that the Earth atmosphere which is only 400 miles thick above the Ground and ends up with the outer Space vacuum sucking the fresh water vapors from Earth's atmosphere if the air CO_2 exceeds certain levels. Said atmosphere structure is not even. Rains are at the atmosphere's bottom. Above that there are different events and above that is the Space vacuum. Therefore, the rainy now weather in Houston reflects the substantially increased amount of the fresh water vapors in the air gas blend blend. Specifically, with the changes in Houston weather you can easily see that over accumulated air CO_2 boils sea water in the Mexican Gulf. Most part of Mexican Gulf is in the Equator area where the Sun gives for free to us up to 1,330 Wt/m^2 of the solar panels. The same happens with the air CO2 which selectively absorbs the solar light infra red energy converting it to heat. That heat boils sea water on the surface of Mexican Gulf causing changes in Houston weather. South winds bring evaporated from Mexican Gulf fresh water condensed in the clouds often offering rain these days. Only 25 years from the Author's arrival to Houston and such a dramatic weather change. So, you can easily see that the changes to the fresh water evaporation to the Space vacuum are coming as we now project - in the next 10-25 years from now. Fresh water shortage will mean the shortage of the crops and the livestock production. The ecological crisis is coming and it will be the worst in the history of the humankind. The Author plans to prevent that from happening. Fig. 10 explains the thoughts of the Author.

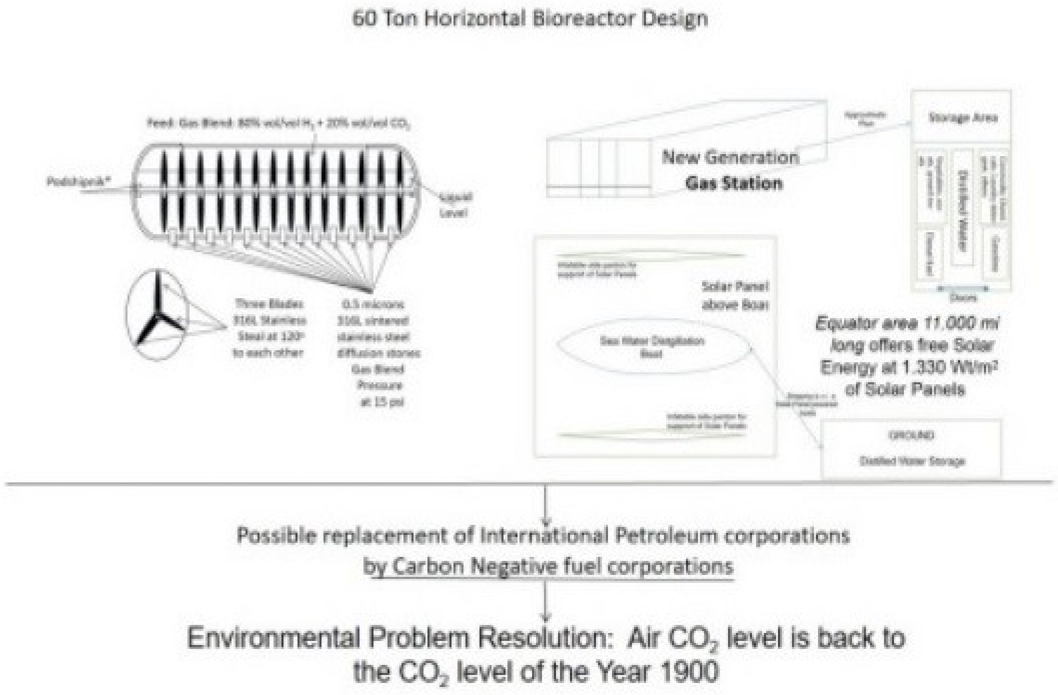

60 Ton Horizontal Bioreactor Design
Feed: Gas Blend: 80% vol/vol H2 + 20% vol/vol CO2
Podshipnik*
Liquid Level
Three Blades 316L Stainless Steel at 120° to each other
0.5 microns 316L sintered stainless steel diffusion stones Gas Blend Pressure at 15 psi
New Generation
Gas Station
Storage Area
Distilled Water
Diesel fuel
Gasoline
Doors
Solar Panel above Boat
Inflatable side portion for support of Solar Panels
Sea Water Distillation Boat
Equator area 11,000 mi long offers free Solar Energy at 1.330 Wt/m² of Solar Panels
GROUND
Distilled Water Storage
Possible replacement of International Petroleum corporations by Carbon Negative fuel corporations
Environmental Problem Resolution: Air CO2 level is back to the CO2 level of the Year 1900

Fig. 10. The intelligent response of the Author to the attempt of SHELL to kill him after his visit and proposition to SHELL to commercialize the proprietary technology of Gasoline manufacture from the air CO_2 for just $0.35 per gallon of product while SHELL and other international petroleum corporations spend over $1.75 to manufacture gallon of Gasoline or Diesel fuel from petroleum. Replacement of petroleum corporations by the Carbon Negative corporations offering Carbon Negative fuels and Carbon Negative genetically engineered foods for the humankind consumption during the time of the proposed fresh water shortage.

The planned price for the Gasoline and Diesel fuel replacements is planned at the level of $2.65-$2.87 per gallon regardless if the fuel will be used for the gasoline or Diesel fuel powered cars / trucks. We have not had a chance to investigate the suitability of this new Carbon Negative mixture use for powering of the air jet turbines yet [36]. We are confident it will work even there, but we have to check it thoroughly and meticulously there like we did with the Gasoline or Diesel fuel powered cars in this article.

Therefore we are gong to save the Earth’s fresh water escaping to the outer Space. What fresh water shortage mean? No crops and no livestock production. Global starvation is coming to Earth. And we are going to revert it by noted herein means. The Author claims he will save this world, he will save the Earth’s fresh water.

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Chapter 4. Inexpensive Resolution of the Global Environmental Problem

Abstract

Shortage of the fresh water on Earth is anticipated in the next 10-25 years. Said fresh water shortage is caused by the enormous air CO_2 accumulation. Besides the expensive opportunity for the outer Space travel suggested by the educated venture capitalists the Author suggest the less expensive way to coup with the anticipated environmental problem - replacement of the international petroleum corporations by the Carbon Negative corporations and the Author is just on it happening after his attempted murder committed by SHELL. The Carbon Negative manufacture is powered by the solar panels. Solar panels are combined with the alkaline batteries to ensure overnight operations. Shipments are powered by solar panels additionally empowering DC motors from decomposed submarines for the bioreactors use, for the distillation boats, distilled water shipping boats, etc. This is the way to resolve the environmental problem the Author has identified would hit the Earth in the next 10-25 years unless the Author interferes like it is stated herein.

Key words: anticipated fresh water shortage; enormous air CO_2 accumulation; replacement of international petroleum corporations by Carbon Negative fuel corporations; solar panels for independence from grid; resolution of the environmental problem on Earth.

Introduction

There is the existing and straightening environmental problem on Earth as the planet of the Solar system. After the year of 1900, when the petroleum fields and petroleum wells became the daily routine for any petroleum containing country, the air CO_2 level has reached the concentration called by NASA specialists in the year of 2010 as the “Point of No Return” to the normal ecological situation of our planet [1]. In 2010 NASA has bombarded the Moon to examine the chemical composition of the debris as the said bombardment result [1]. And NASA specialists have found plenty of ice on the dark (-293 ° C) side of the Moon. They were guessing where that water came from and how did it happen [1]. The answer is already clear: the fresh water came from Earth. How? The Author spent over 30 years doing practically lyophilization of microbial cultures for the long term storage and transportation. The Author became very experienced in said lyophilization and knows exactly the real meaning of the components for said lyophylization systems: the object to dry under vacuum, vacuum that eliminates vapors of the solvent (in our case of culture lyophilyzation the solvent was the fresh water), the coils of the cooler essential for the process and any object placed in this vacuum. Therefore, the answer to the question that NASA had in 2010 finding ice on the dark surface of the Moon is very simple: the dark surface of the Moon (-293^oC) in the Space where vacuum is everywhere capturing the fresh water vapors coming from the Earth atmosphere and then getting frozen at the extremely dark Moon surface (works as the object placed in the cooled lyophilization chamber). How and why the fresh water vapors in the air mass are important?. The air is the mixture of gases with the average density of 1.22 g/m^3. Gases of the air gas bend are different. Some have density less then 1.22 g/m^3 , some are heavier than that. The average air CO2 density is 1.97 g/m^3 [1]. There are certain inert gases that are heavier then the air CO_2 but their content in the air gas blend is extremely low. However the air CO_2 concentration became very high even in 2010, reaching the point of 400 ppm which NASA has called the “**Point of No Return**” [1]. These days the air CO_2 concentration is 450 and raising above that causing the Global Warming [28]. What is the problem associated with that? The CO_2 absorbs solar infrared energy which is converted into heat when is absorbed by the air CO_2. Where the air CO_2 is located? It has the density of 1.97 g/m^3 which is much higher then the average air gas blend density of 1.22 g/m^3 . Under the gravity force the air CO_2 is attached to the Ground. What if the Ground and why it is important that the air CO_2 covers the Ground? In France there is the cave where the air CO_2 level above the floor of that cave is very high. When dogs are taken to said cave they die since they cannot breath the air with high content of the air CO_2 [1]. The

Ground is the refuge for all the fresh water coming from sky (rains, snow), fresh water from melting snow and ice, etc. All the rivers and creeks start from the Ground. Certain creeks and rivers end up forming lakes or ponds. What happens if the Ground by the natural Earth’s gravity force is covered with the air CO_2? The CO_2 gets hot due to the Sun light conveying the infra red energy to the air CO_2. The air CO_2 gets very hot and its temperature even exceeds the water boiling temperature under the normal atmospheric pressure in the most Southern States of the US during the summer time. If not boiling the elevated air CO_2 concentration substantially increases the amount of the fresh water vapors in the air. What is the air besides it is a mixture of gases? The air is attached to the Earth Ground by the same gravity force. The thickness of the air layer above the Ground is only about 400 miles. What is above that air layer? The Space vacuum. What has happened to the fresh water vapors in the air? Fresh water vapors mostly evenly distributed in the air gas blend are sucked by the Space vacuum when the air gets in contact with that Space vacuum. And that is why the dark surface of the Moon located at the distance of 220,000 from Earth is covered with the ice which is the frozen fresh water vapors which came to the Space from Earth. Moon works as the cold trap for the fresh water vapors coming to the outer Space from Earth.

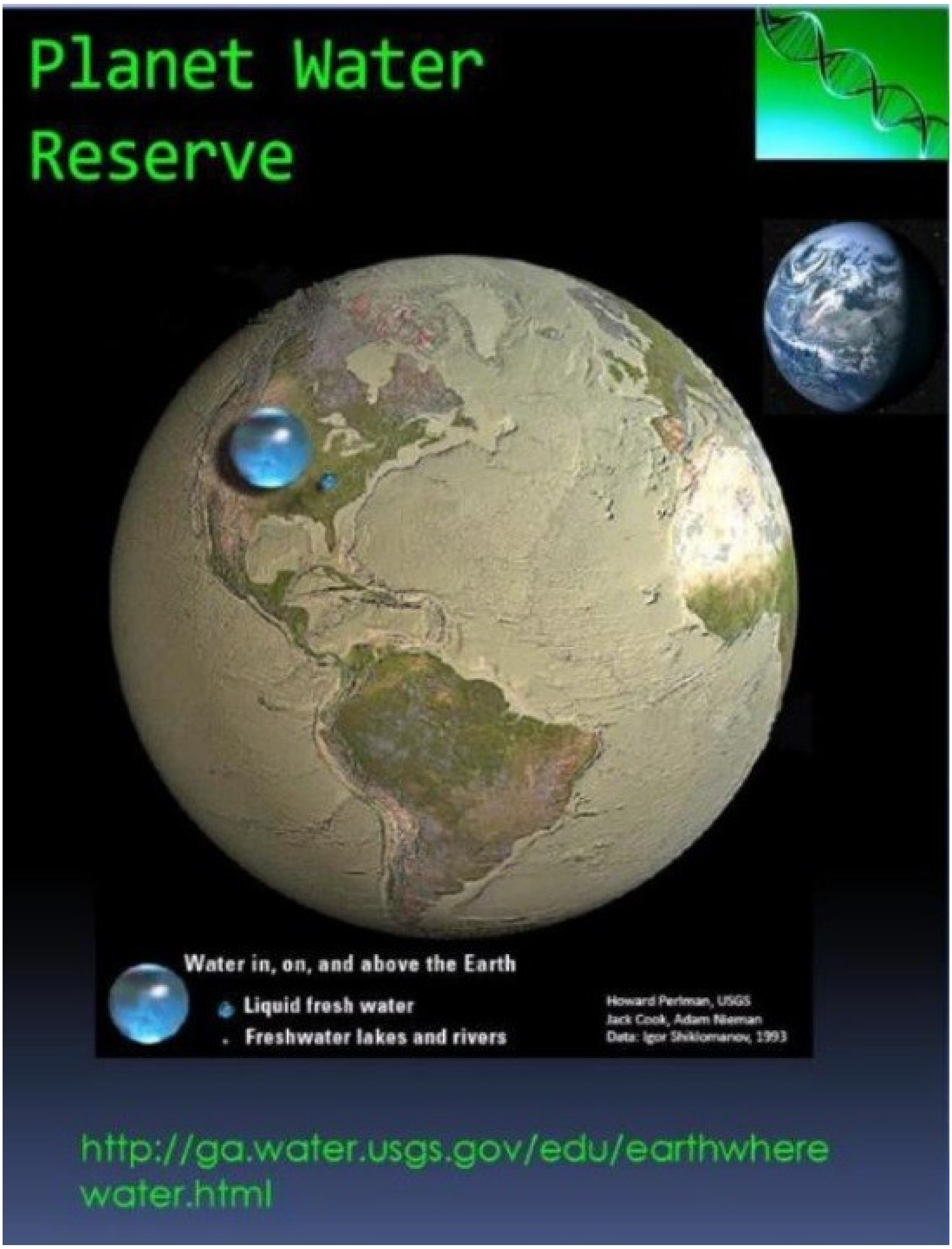
How the concentration of the air CO_2 increases? Burning of fuels does that, increase the air CO_2 concentration. Fuels are produced from the distillation of petroleum at the petroleum refineries owned / rented by the international petroleum corporations. The Gasoline fraction of petroleum is C_7-C_9, the Diesel fuel fraction is C_{10}-C_{15}. Every year the transportation needs are increasing. That is why the air CO_2 increases. What the second child tells to their parents when become 16 yo? “I do not want the car which my older brother has, I want another car”. And parents also drive. Etc. The Author came to Houston in 1998 and immediately was impressed with the sunny weather daily, with blue and bottomless sky. What weather is now in Houston?

Almost daily there is rain. Where clouds covering now Houston sky came from? It is evaporated from the Mexican Gulf by the significantly increased air CO_2 absorbing Sun’s infra red energy converted immediately to heat heating the Houston Ground and Mexican Gulf located mostly at the equatorial ears, the fresh water vapors condensed into clouds and such clouds even make rains. The Author might guess that the overall sky over the Earth might be covered with clouds, partially, at least, with no fee from clouds areas. Said clouds now are originating from the extra fresh water vapors generated by the increased air CO_2 and the Solar infra red energy coming from the Sun light. This is what is called Global Warming [29] finishing up as the Author trusts now in 10-25 years from now by the shortage of the fresh water originated from the fresh water vapors as above and sucked by the outer Space vacuum. Certain planets will get the fresh water originating from Earth, but where and when is not clear at the current state of development of the outer Space travel crafts. The progress with that is discussed below.

Education is the key to understand the environmental problems, in particular. Certain venture capitalists have enough education to understand that Earth has reached the “Point of No Return” as NASA said in 2010 [1]. Among them are our heroes Mr. Elon Mask [2] and Mr. Jeff Bezos [3-5]. Mr. Elon Mask and Mr. Jeff Bezos spend tremendous amounts of cash trying to resolve the existing problem of the Space Aircrafts engineering, design, construction and manufacturing. After years of failures they have reached the substantial progress.

Between 1970 and 2000, the cost to launch a kilogram to Space remained fairly steady, with an average of US$18,500 per kilogram. When the space shuttle was in operation, it could launch a payload of 27,500 kilograms for $1.5 billion, or $54,500 per kilogram. For the Space X Falcon 9, the US rocket used to access the ISS, the cost is just $2,720 per kilogram [2]. So, travel away from Earth, to new planets, similar to Earth by the fresh water content and the atmosphere gas blend composition now becomes possible more and more daily. Expensive projects, and the return of the investment is never guaranteed. Looks now like a very expensive toy. Is not it? Are there any ways to improve the significantly damaged ecological situation on Earth?

Are there any less expensive ways to improve the compromised life on Earth? Yes, there are. In particular, the replacement of the existing international petroleum corporations distilling petroleum to gasoline and Diesel fuel and producing a lot of the extra air CO_2 during said petroleum distillation, replacement by the Carbon Negative corporations, which the Author promotes [1]. The time to get rid of said international petroleum corporations is significant and the war has already started by SHELL which attempted to kill the Author but the Author is immortal just like the known Jesus Christ. The anticipated by the Author shortness of the fresh water of Earth (Fig. 1 and Fig. 2) could be compensated by the distillation of the salty sea water. That will require the additional attraction of the venture capitalists investments above the investments made to the promotion of the Carbon Negative fuels manufacture. It is important to remind the readers of this original article that the Equator are of Earth offers free Solar light energy at the level of 1.330 Wt/m^2 of the modern solar panels [1]. This area is 11,000 miles long and mostly represented by the ocean water. The field for the investor’s cash investment is absolutely tremendous [1].



Planet Water Reserve

Water in, on, and above the Earth
Liquid fresh water
Freshwater lakes and rivers
Howard Perlman, USGS
Jack Cook, Adam Nieman
Data: Igor Shiklomanov, 1993

http://ga.water.usgs.gov/edu/earthwherewater.html

Fig.1. Fresh water reserves of the planet Earth [6].

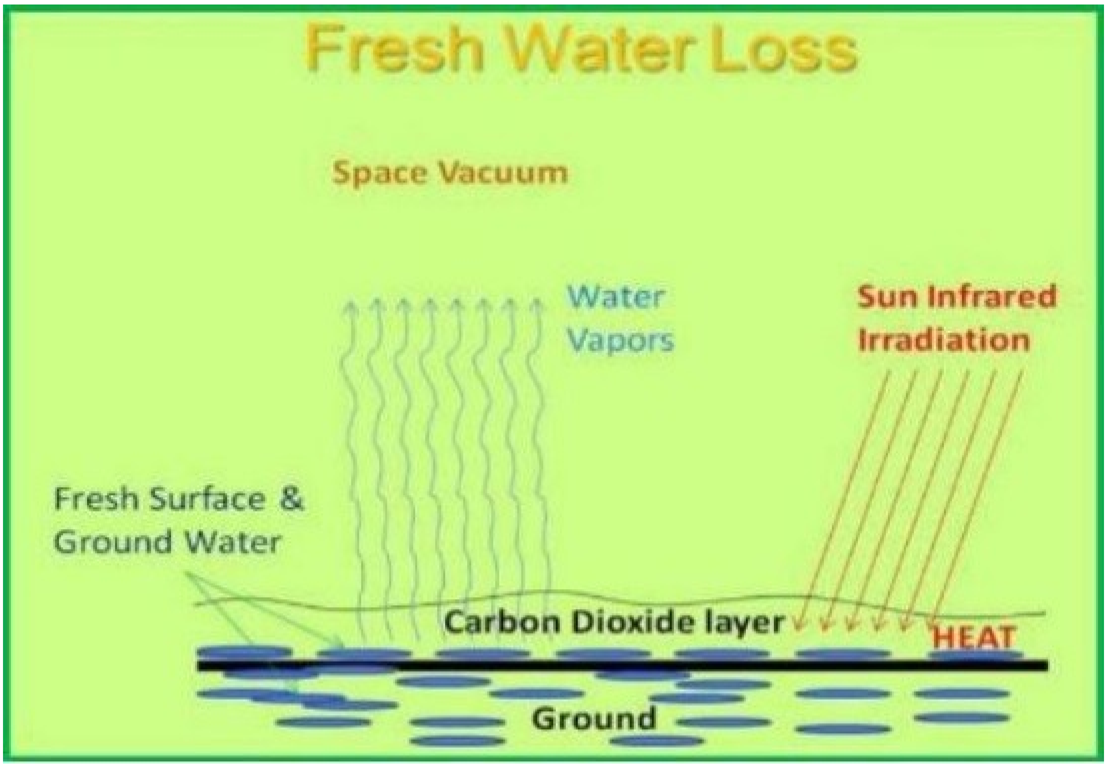


Fig. 2. Loss of fresh water from Earth to the Space vacuum due to the elevated air CO_2 concentrations [1].

Speaking on the dependence of the Solar insulation on the place location latitude, some time back the Author worked at the Celanese Chemicals Corpus Christi R & D Center (shut down after the 09/2001 attack of the terrorists on the US soil). So, the Celanese Chemicals workers have advised the Author that in the Houston area farmers normally collect two harvests of corn. Dow South to the Mexican border, in the are of McAllen, TX, the farmers collect already 3 harvest of corn annually. That is the latitude is extremely important for the use of the Solar power. The best free Solar energy is available in the Equator area as mentioned above herein. Carbon Negative Gasoline and Diesel fuel replacements the Author has discussed before [7-24]. The most important part of said discussions is the transportation problem between the manufacturing places and the Ground. 8 The Carbon Negative fuels manufacture is based on the use of the Solar energy for free, there will be no any connection to the grid. That is easy to say but not easy to develop. Solar panels provide DC current. The voltage depends on the amount of solar panels connected in series. The total output current depends on the amount of solar panels connected in parallel. Therefore the problem of the use of the Solar power is mainly the problem of how much the Author is going to raise in the investment.

Technically speaking the DC power provided by the solar panels can be used efficiently by the DC motors of various power. Said DC motors might be available from the US shipyards decomposing the outdated submarines. Said submarines have the DC motors powered in them by the alakaline batteries. Said motors might be used as the fermentor motors (Fig. 3) or motors for the boats transporting distilled water. So the word “batteries” was indicated herein. Batteries are important if the Author is using solar panels for the 24/7/365 work schedules. Even at the Equator area there is the night time when no any solar energy is available. For that time there is the need for the alakaline batteries also available from the US shipyards from the decomposed submarines and charged during day time from the solar panels (such panels must be assembled in such a way that the extra power is generated to provide the charge of the alkaline batteries for the night time use for the uninterrupted operations 24/7/365.

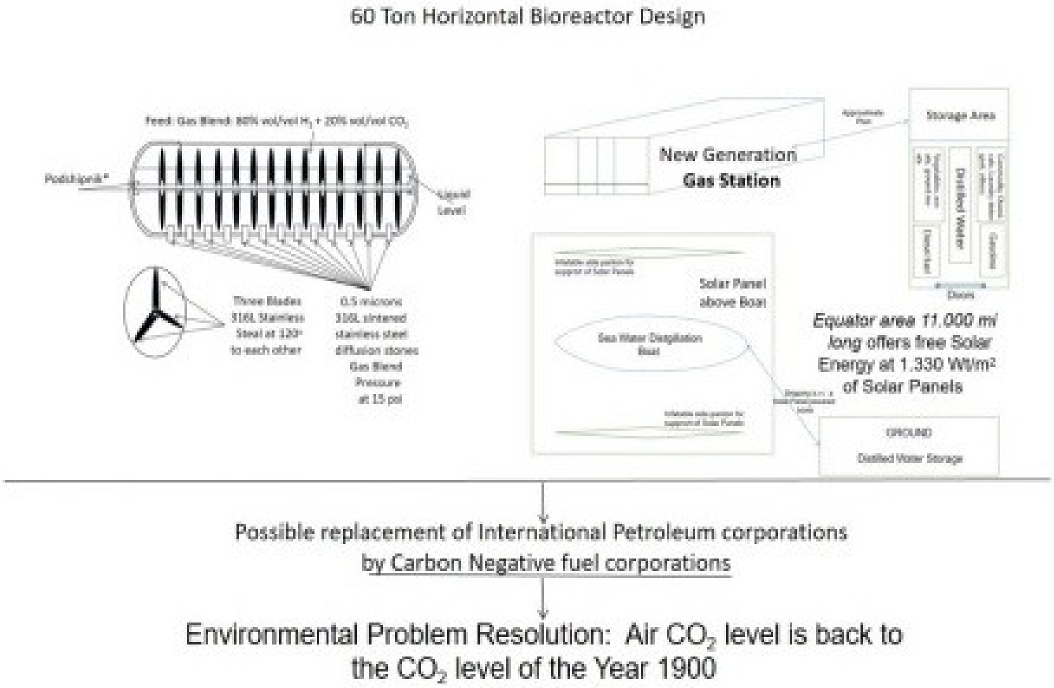

60 Ton Horizontal Bioreactor Design
Feed: Gas Blend: 80% vol/vol H_2 + 20% vol/vol CO_2
Podshipnik*
Liquid Level
Three Blades 316L Stainless Steel at 120° to each other
0.5 microns 316L sintered stainless steel diffusion stones Gas Blend Pressure at 15 psi
New Generation Gas Station
Storage Area
Distilled Water
Doors
Solar Panel above Boat
Sea Water Distillation Boat
Equator area 11,000 mi long offers free Solar Energy at 1.330 Wt/m² of Solar Panels
GROUND
Distilled Water Storage
Possible replacement of International Petroleum corporations by Carbon Negative fuel corporations
Environmental Problem Resolution: Air CO_2 level is back to the CO_2 level of the Year 1900

Fig. 3. The way to say “Hi” to the major international petroleum corporations after SHELL attempted to kill the Author but the Author survived said killing by SHELL (*see Declaration of Interest section herein, HPD report is available*).

Materials and Methods

The Author was really surprised when all his planned herein experimental parts with the Carbon Negative replacement of Gasoline and Diesel fuel worked as described before [7-24]. Data on testing of the Carbon Negative fuel using real Gasoline and Diesel fuels vehicles.

Results on no any visible defects or vehicles misbehavior while driving, no unusual exhaust gas emissions

The certified mechanics from the respective car dealerships meticulously tested the respective corporate cars at the corporate manufacturing site and drove said cars on the roads nearby the manufacturing site meticulously to reveal any damages caused by the replacement of the Gasoline or the Diesel fuel by the suggested mixture of Carbon Negative fuels. The cars were placed on the treadmill with the device to check the engine emissions. No unusual engine emissions were noted by said mechanics for all tested corporate cars. Then the mechanics made the test drives of the each said vehicle. No any mechanical or any other damages to the engines of the all said cars were ever revealed upon said thorough testing. Test drives of each said vehicle by the certified mechanics did not reveal any abnormal driving behavior in any of said cars. The mechanics still did not make any further recommendations on the following use of the Gasoline and the Diesel fuel replacement leaving for the Author the possibility of reporting this very good news to the general public.

The gas mileages of the cars used to test the carbon negative fuel DAA as the replacement of Gasoline were 37 mpg on the highway and 31 mpg in the city of Brownsville. You can easily calculate the average gas mileage from said numbers. But the overall picture looks to us very promising since the gas mileage even slightly exceeded the Gasoline from petroleum use mileage in Toyota Camry. Due to the limited number of the tested cars we cannot make any predictions for the other car makes and the cars made before the year of 2020.

This will become the risk of the other car owners, who will decide to replace their gasoline with the produced from the air CO_2 mixture of fuel DAA. If you remember our corporate goal is to replace all the petroleum use by the use of the air CO_2, initially to resolve the issue of the transportation problems, substantially increasing the air CO_2 content via the air CO_2 accumulation and eventually to decrease the air CO_2 content causing the fresh water loss to the outer Space vacuum as stated before.

Fuel efficiency of the new Carbon Negative replacements of the Gasoline and Diesel fuel

For the use of said Carbon Negative fuel DAA as the Diesel fuel replacement for over the 20,000 miles runs, the 20,000 miles old 2020 Shevrolet Silverado 2500HD truck was used. The Diesel fuel mileage was achieved on the highway at the average diesel fuel mileage ~38 mpg, and at ~32 mpg driving in the city. The calculated the combined driving efficiency was about ~36 mpg. The Author does not take any risk in forecasting the Diesel fuel mileage behavior of the other diesel cars/trucks makes and per the mileage forecasting for the Diesel cars/trucks makes older than the year of 2020.

The new gas stations selling Carbon Negative DAA along with the Carbon Negative genetically engineered foods and normal foods for home cooking of the customers showed pretty much promising tendencies of improved sales of both the carbon negative fuel and the foods, both genetically engineered and regular. Apparently customers really appreciated the opportunity to save their time while visiting said new version of the gas stations selling also foods for the households. Saving of the customers time was our primary priority and the new route to improve sales of the carbon negative fuels. Basically we have reached our goal; the new kind of the gas stations will probably replace the existing gas station selling only snacks and Gasoline and Diesel fuel manufactured from petroleum.

Data on testing of the Carbon Negative fuel using real Gasoline and Diesel fuels vehicles.

The Author was really surprised when all his planned herein experimental parts with the Carbon Negative replacement of Gasoline and Diesel fuel worked as described before [7-24].

Results on no any visible defects or vehicles misbehavior while driving The certified mechanics from the respective car dealerships meticulously tested the respective corporate cars at the corporate manufacturing site and drove said cars on the roads nearby the manufacturing site meticulously to reveal any damages caused by the replacement of the Gasoline or the Diesel fuel by the suggested mixture of the Carbon Negative fuels. The cars were placed on the treadmill with the device to check the engine emissions. No unusual emissions in the cars exhausts No unusual engine emissions were noted by said mechanics for all tested corporate cars. Then the mechanics made the test drives of the each said vehicle. No any mechanical or any other damages to the engines of the all said cars were ever revealed upon said thorough testing. Test drives of each said vehicle by the certified mechanics did not reveal any abnormal driving behavior in any of said cars. The mechanics still did not make any further recommendations on the following use of the Gasoline and the Diesel fuel replacement leaving for the Author the possibility of reporting this very good news to the general public.

The gas mileages of the cars used to test the Carbon Negative mixtures as the replacement of Gasoline were 37 mpg on the highway and 31 mpg in the city of Brownsville. You can easily calculate the average gas mileage from said numbers. But the overall picture looks to us very promising since the gas mileage even slightly exceeded the Gasoline from petroleum use mileage in Toyota Camry. Due to the limited number of the tested cars we cannot make any predictions for the other car makes and the cars made before the year of 2020. This will become the risk of the other car owners, who will decide to replace their gasoline with the produced from the air CO2 mixture of fuel DAA. If you remember our corporate goal is to replace all the petroleum use by the use of the air CO_2, initially to resolve the issue of the transportation problems, substantially increasing the air CO_2 content via the air CO2 accumulation and eventually to decrease the air CO_2 content causing the fresh water loss to the outer Space vacuum as stated before.

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Results

The Author was really surprised when all his planned herein experimental parts with the carbon negative replacement of Gasoline and Diesel fuel worked as described before [3]. Data on testing of the carbon negative fuel using real Gasoline and Diesel fuels vehicles. Results on no any visible defects or vehicles misbehavior while driving The certified mechanics from the respective car dealerships meticulously tested the respective corporate cars at the corporate manufacturing site and drove said cars on the roads nearby the manufacturing site meticulously to reveal any damages caused by the replacement of the Gasoline or the Diesel fuel by the suggested mixture of fuel DAA. The cars were placed on the treadmill with the device to check the engine emissions. No unusual engine emissions were noted by said mechanics for all tested corporate cars.

Then the mechanics made the test drives of the each said vehicle. No any mechanical or any other damages to the engines of the all said cars were ever revealed upon said thorough testing. Test drives of each said vehicle by the certified mechanics did not reveal any abnormal driving behavior in any of said cars. The mechanics still did not make any further recommendations on the following use of the Gasoline and the Diesel fuel replacement leaving for the Author the possibility of reporting this very good news to the general public.

The gas mileages of the cars used to test the carbon negative fuel DAA as the replacement of Gasoline were 37 mpg on the highway and 31 mpg in the city of Brownsville. You can easily calculate the average gas mileage from said numbers. But the overall picture looks to us very promising since the gas mileage even slightly exceeded the Gasoline from petroleum use mileage in Toyota Camry. Due to the limited number of the tested cars we cannot make any predictions for the other car makes and the cars made before the year of 2020. This will become the risk of the other car owners, who will decide to replace their gasoline with the produced from the air CO_2 mixture of fuel DAA. If you remember our corporate goal is to replace all the petroleum use by the use of the air CO_2, initially to resolve the issue of the transportation problems, substantially increasing the air CO_2 content via the air CO_2 accumulation and eventually to decrease the air CO_2 content causing the fresh water loss to the outer Space vacuum as stated before. Fuel efficiency of the new Carbon Negative replacement of the Gasoline and Diesel fuel.

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The new gas stations selling Carbon Negative DAA and the Gasoline replacement along with the Carbon Negative genetically engineered foods and normal foods for home cooking of the customers showed pretty much promising tendencies of improved sales of both the Carbon Negative fuel and the foods, both genetically engineered and regular. Apparently customers really appreciated the opportunity to save their time while visiting said new version of the gas stations selling also foods for the households. Saving of the customers time was our primary priority and the new route to improve sales of the carbon negative fuels. Basically we have reached our goal; the new kind of the gas stations will probably replace the existing gas station selling only snacks and Gasoline and Diesel fuel manufactured fro petroleum.

Discussion

Apparently SHELL started the war between the Author and the major petroleum international corporations. As the Author's response to this attempted murder the Author has come with the investor plans almost fulfilled now and now he plans to expand said war with the new generation of the gas 17 stations. Said gas stations are intended to save much of time for the valuable customers who buys the Carbon Negative fuels. In addition to the Carbon Negative fuels said gas stations sell additionally the multiple foods for the home cooking, chemicals for doing laundry, cleaning /

repairing shoes, making home repairs, etc. Therefore the time saving comes from said new gas stations via substituting the visiting of the Walmart, grocery stores, shoe repair facilities, etc. Especially when it comes to making the home repairs. In addition to that said new gas stations offer the ordering system, like it is now available at the Walmart and other stores where the customers order on line the necessary fr them goods and get said foods delivered to the new type of the gas stations. The new type of the gas stations have additional storage facilities for location of said ordered goods and their mandatory set of goods. That substantially extends the number of valuable customers who will use the carbon negative fuels. As Fig. 3 suggests, the combination of the new type of the horizontal bioreactors, technologies to manufacture the carbon Negative fuels and the new type of the gas stations saving lots of time for the customers will help in the planned by the Author substantial reduction of the content of the air CO2. The purpose of the Author is to resolve the named environmental problem on Earth which is anticipated in the next coming 10-25 years. This is the inexpensive way to resolve the stated environmental problem when people will kill for the glass of fresh water and hamburger. Hopefully, this will happen as planned by the Author in the best and intelligent way opposite to the noted above proposed acts of aggressive behavior.

As Fig. 3 shows the new type of the horizontal bioreactors together with the new technologies of manufacturing of the Carbon

Negative fuels, combined with the added power of the alkaline batteries to power the Carbon Negative manufacturing for the overnight periods for the DC motors from the decomposed submarines the Author plans to get from the US shipyards all together will bring the air CO_2 content to the level of the year 1900 or just before the intensive use of petroleum, recovery of said petroleum from the Ground. This will be the response the Author has to give to the major petroleum corporations and to one of them SHELL which has attempted to kill the Author. It is important to note that any transportation needs of the holding the Author has now, and it acquired the corporations listed as the places to work for the Author currently, are performed either on the Carbon Negative fuels or on the solar panels if the transportation is on the boat. The boat engines are the DC engines the Author got from the US Shipyards from the decomposed submarines. From the same source the Author will get the alkaline batteries complementary to the solar panels powering the bioreactors, lower power devices, boats, etc. This is done for the overnight operations at all levels of the holding the Author has now to make sure the operations in the holding are 24/7/365 with no any interruption by the international petroleum corporations which have started the war against the Author. This is the other response the Author has made to SHELL and other international petroleum corporations after the Author’s attempted murder committed by SHELL.

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Chapter 5. Industrial Use of Products from Acetogens

The Author. The Author is Dr. Michael Vladislavovich Tyurin, B. Sci. (1984), M. Sci. (1985), M.D. (Internal Medicine, 1986), all obtained from Saratov State Medical University, and Ph.D. in Molecular Biology, Molecular Pharmacology, Microbiology (1990) from the USSR Research Institute for Antibiotics. Dr. MV Tyurin had a Middle Name Vladimirovich, but upon his father's change of his first name from "Vladimir" to "Vladislav" has changed his middle name to the middle name "Vladislavovich" in 2020. Dr. Michael Vladislavovich Tyurin is the CEO, Executive Chairman, President of Microbial Biocatalyst International, Inc. and Inorgcarbdiesel, Inc., the companies doing manufacturing of carbon negative fuels Gasoline and Diesel fuel replacements.

Abstract

Acetogens have a very long history on our planet Earth. Now the Author uses genetically engineered biocatalysts based on the Acetogen cells to manufacture Carbon Negative fuels replacing Gasoline and Diesel fuel manufactured from petroleum. The volumes of the proprietary 60 tons fermentation modules and the amounts of the biomass of the Acetogens biocatalysts after the recovery of said Carbon Negative fuels are high enough to think about their industrial applications. The Author proposes several ways of industrial use of said Acetogen biomass.

Key words: Acetogens are the oldest life form; genetic engineering of Acetogens; Carbon Negative fuels and Carbon Negative genetically engineered foods; 60 tons horizontal bioreactors to make Carbon Negative fuels; ways of use resulting Acetogens biomass.

Introduction

The Earth history is always intriguing. The specialists tell the age of Earth is about 4.54 ± 0.05 billion years (4.54×10^9 years ± 1%) [22-26]. Initially the atmosphere on Earth contained various gases with the dominance of CO, CO_2, H_2, fresh water vapors/ water. Space is a valuable source of the life forms travelling in the very deep cold and in vacuum on the asteroids, comets, etc. - any moving object in Space might contain the life forms - frozen in vacuum bacterial bodies, bacterial spores, spores of Algae, etc. Under the purely anaerobic conditions the Acetogens brought to Earth from the outer Space started propagating since they convert the CO and the CO_2 in the presence of water to the acetic acid [27]. Acetogens accumulated their biomass, acetic acid to the extent to attract germination of the Algae spores also brought from the outer Space by the same moving objects. Algae spores started germinating and Algae cell forms became formed for as long as the biomass and acetic acid developed by Acetogens allowed Algae. Algae formed initial amounts of Oxygen which was toxic for

Acetogen cells. This process had multiple interruptions due to the tectonic activity of the Ground of Earth and due to the Earth atmospheric fluctuations. The process described herein was for certain time before the oxygen has been formed in the amounts high enough to maintain life of the other life forms developed on Earth due to the natural life developmental process in the presence of Oxygen and fresh water. The life has started on Earth. The Author does not touch the question when and how the human being were formed since the Author does not have enough qualifications and the information to do so.

Unfortunately, the human beings came to the status of the civilization consuming petroleum as the Gasoline and Diesel fuel for the translocations, the transport needs. Burnng of said fuels produced air CO_2 in the amounts which allowed NASA to call said air CO_2 concentration of 400 ppm in the year of 2010 as the "Point of No return" to the healthy environment which has been established on Earth before the year of 1900 or just before the abundant petroleum distillation to Gasoline and Diesel fuel. Per the Author's perception the need to decrease the content of the air CO_2 has to be done by the replacement of the air CO_2 production by the air CO_2 consumption.

The Author has already developed the inexpensive (compared to the International Petroleum Corporations like SHELL, BP, and others) technologies of manufacturing Carbon Negative replacements of Gasoline and Diesel fuel [2-18]. Said International

Companies spend over $1.75 to manufacture 1 gallon of Gasoline or Diesel fuel from petroleum using petroleum refineries thy own / rent. Said Carbon Negative technologies is one of the steps the Author has taken in response to his attempted murder committed by SHELL after the Author has offered SHELL his proprietary technology of Gasoline manufacturing from the air CO_2 for $0.35 per gallon of product (the Declarations section of this original article). Now there is the great time to picture to the readers what to do with the heavy biomass of biocatalysts-Acetogens already used for the manufacture of the inexpensive Carbon Negative fuels Gasoline or Diesel fuel replacements and left after the recovery of said Carbon Negative fuels [2-14] or to use said biomass for the commercial manufacture of the acetic acid [20] along with the genetically engineered foods [20] (Fig. 1).

The Author attempted to expand his efforts towards the manufacture of foods for livestock and the manufacture of the agricultural fertilizers (Fig. 2).

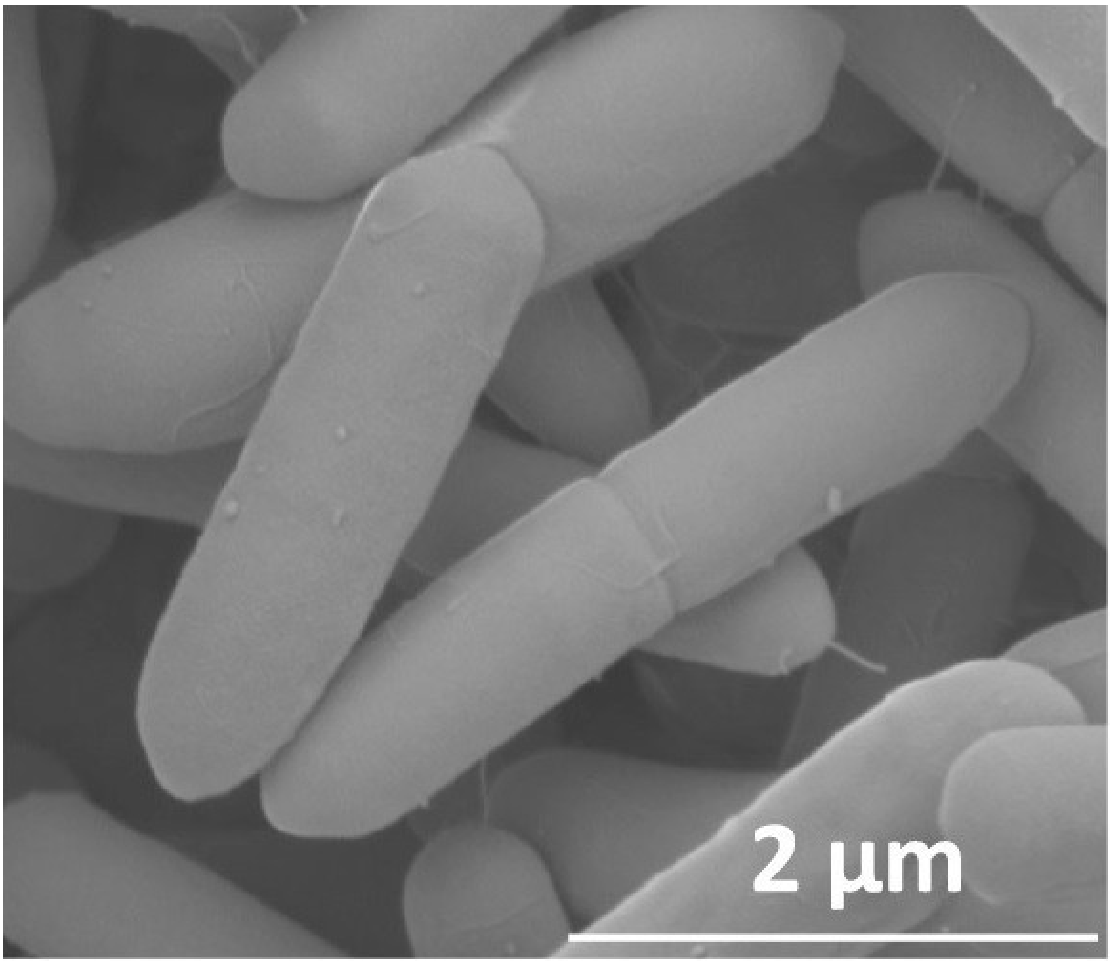

Fig. 1. Typical appearance of the Acetogen cells [21].

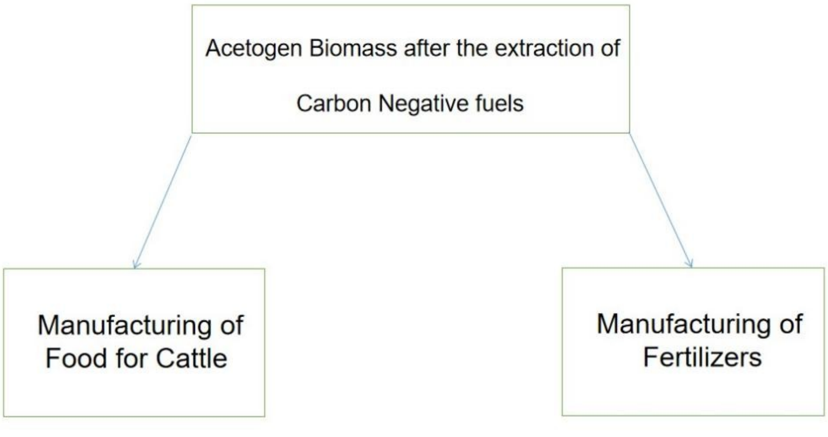
Acetogen Biomass after the extraction of Carbon Negative fuels
Manufacturing of Food for Cattle
Manufacturing of Fertilizers

Fig. 2. Proposed by the Author use of the collected Acetogen biocatalysts biomass after the Carbon Negative fuels extraction.

Materials and Methods

The metabolic engineering of the Acetogen biocatalyst to manufacture acetone from the air CO_2 comprised inactivation of phosphotransacetylase via integration of a cassette comprising synthetic genes *erm*(B), thiolase and HMG-CoA synthase. Acetaldehyde dehydrogenase was inactivated via integration of a cassette consisting of synthetic genes *cat*, HMG-CoA lyase and acetoacetate decarboxylase [16].

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Resulted Carbon Negative fuel DAA was successfully used in both Gasoline consuming 2001 Toyota Camry and the fancy Peugeot 2008 for 20,000 miles each car.

Certified mechanics from the Toyota and Peugeout dealerships were invited to the corporate garage of our corporations to meticulously check stated cars driving and mechanical damages, especially in thew engine compartments.

Development of Carbon Negative Foods.

The genetic engineering of the fungi performed as described before for the genetic engineering of the Acetogens-biocatalysts

At the first step the Author has eliminated fungi genes not essential for the fungi maintenance and propagation [1]. At the second step of genetic engineering of fungi is the cloning in fungi of the recombinant genes of lamb and other animals (not listed herein) or the genes of tomatoes, potatoes, cabbage, bread and spice, depending on the target organism and product selected.. Said genetically engineered fungi will be cultivated in the sterile environment at the corporate site.

The special care will be taken about the contracting capabilities of the genetically engineered muscle tissues allowing the muscle tissues of said genetically engineered creatures to grow as the natural muscle tissue has to grow with the training of the muscle owners.

Genetically engineered meats.

The Author trusts that his energy and cell components of the Carbon Negative manfacturing system developed recently for the engineered Acetogen Biocatalysts should work well without any complications in genetically engineered fungi (the species has to be determined yet) containing the genes of lamb structures as thought originally should work without any problems in genetically engineered fungi (the species has to be determined yet) containing the genes of meat production. Original thinking of the Author was about the lamb originated genes, but that might change at the level of operations. A variety of genes encoding various meat structures must be engineered to add the smell and the feeling at the teeth during chowing the exact feeling of the meat structures consumed. Like the sensation of cracking the rib, cartilage, etc.

The special care will be taken about the contracting capabilities of the genetically engineered muscle tissues allowing the muscle tissues of said genetically engineered creatures to grow as the natural muscle tissue has to grow with the training of the muscle owners.

Genetically engineered tomatoes, potatoes, cabbage, etc.

The Author trusts that the energy generation and cell components structures creation could be produced by the Carbon Negative system genome developed recently for the engineered Acetogen Biocatalysts [2-18] should work well without any complications in genetically engineered fungi (the species has to be determined yet) containing the genes of respective vegetables production. The Author eventually will not be able to provide the exposure to the Sun light and the fresh air of said genetically engineered tomatoes, potatoes, cabbage and other vegetables which have to be maintained under the sterile conditions over the lifetime of the genetically engineered fungi-based systems.

Genetically engineered bread and bread-based products

The Author trusts that the energy and cell components Carbon Negative system developed recently for the engineered Acetogen Biocatalysts should work well without any complications in genetically engineered fungi (the species has to be determined yet) containing the genes of respective bread and bread-based products production. The Author has to engineer and design the system for baking of said genetically engineered bread and bread-based products. Eventually there will be certain problems with not properly cooked genetically engineered bread and bread-based products.

Genetically engineered Spices

The Author has given great thought about spices. Any food especially genetically engineered one has to have salt and spices. The Author did not think about the genetic engineering of salt, it has to be available with no limitations. But genetically engineered spices based on pepper and other components used to produce spices have to be engineered. The Author trusts that the energy and cell components Carbon Negative system developed recently for the engineered Acetogen Biocatalyst should work well without any complications in genetically engineered fungi (the species has to be determined yet) containing the genes of respective genetically engineered pepper and other components giving the taste of spices. The salt will be added to such genetically engineered spices as the powder which can be sterilized as usually to get into the sterile genetically engineered environment, or there will not be any need for that.

Results

The Author was very happy when all his planned herein experimental parts of the use of the Carbon Negative replacement of Gasoline worked as described before [2-11, 13].

Data on testing of the Carbon Negative fuel use in real Gasoline and Diesel fuels vehicles. Results on no any visible defects in the vehicles or vehicles misbehavior while driving

The certified mechanics from the respective car dealerships meticulously tested the respective corporate cars at the corporate manufacturing site and drove said cars on the roads nearby the manufacturing site meticulously to reveal any damages caused by the replacement of the Gasoline by the suggested Carbon Negative Gasoline replacement or its mixture with the DAA (the runs at normal TX temperatures fro all the time). The cars were placed on the treadmill with the device to check the engine emissions.

No unusual emissions in the cars exhausts

No unusual engine emissions were noted by said mechanics for all tested corporate cars. Then the mechanics made the test drives of the each said vehicle. No any mechanical or any other damages to the engines of the all said cars were ever revealed upon said thorough testing. Test drives of each said vehicle by the certified mechanics did not reveal any abnormal driving behavior in any of said cars. The mechanics still did not make any further recommendations on the following use of the Gasoline and the Diesel fuel replacement leaving for the Author the possibility of reporting this very good news to the general public. The gas mileages of the cars used to test the Carbon Negative fuel Isobutanol as the replacement of Gasoline were 37 mpg on the highway and 31 mpg in the city of Brownsville for all tested herein cars. You can easily calculate the average gas mileage from said numbers. But the overall picture looks to us very promising since the gas mileage even slightly exceeded the Gasoline from petroleum use mileage in Toyota Camry. Due to the limited number of the tested cars we cannot make any predictions for the other car makes and the cars made before the year of 2020. This will become the risk of the other car owners, who will decide to replace their gasoline with the produced from the air CO_2 carbon negative Gasoline replacement. If you remember our corporate goal is to replace all the petroleum use by the use of the air CO_2, initially to resolve the issue of the transportation problems, substantially increasing the air CO_2 content via the air CO_2 accumulation and eventually to decrease the air CO_2 content causing the fresh water loss to the outer Space vacuum as stated before.

Fuel efficiency of the new Carbon Negative replacement of the Gasoline and Diesel fuel

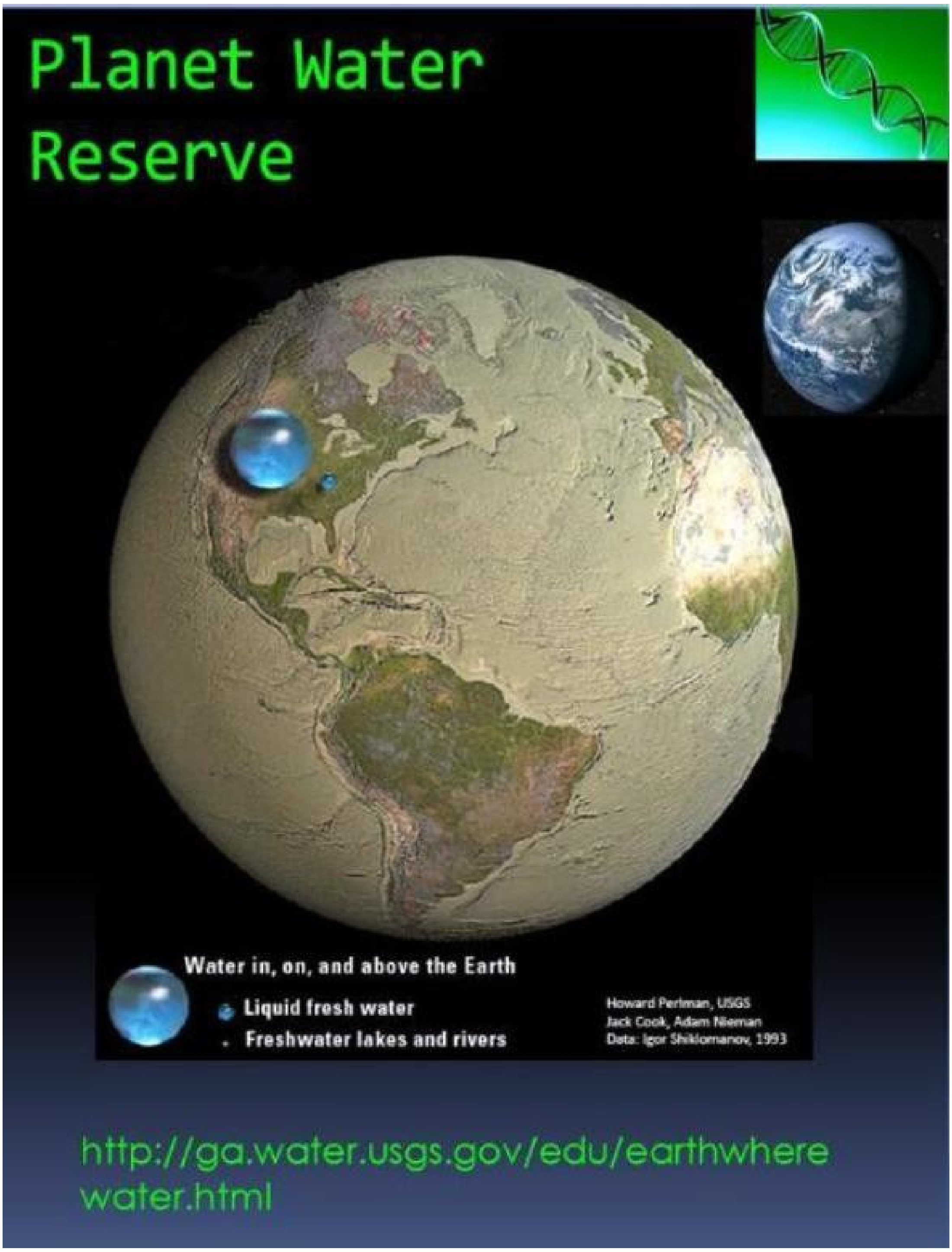
The new gas stations selling Carbon Negative DAA along with the genetically engineered foods and normal foods for home cooking of the customers showed pretty much promising tendencies of the improved sales of both the Carbon Negative fuel and the foods for the home cooking and consumption. Apparently customers really appreciated the opportunity to save their time while visiting said new version of the gas stations selling also foods for the households. Saving of the customers time was our primary priority and the new route to improve sales of the carbon negative fuels. Basically we have reached our goal; the new kind of the gas stations will probably replace the existing gas station selling only snacks and Gasoline and Diesel fuel manufactured from petroleum.

Discussion

The purpose of this writing is to continue convincing the readers of the need to replace the international petroleum corporations by the corporations producing Carbon Negative fuels from the air CO_2. When the Author has arrived to Houston in 1998, the sky was always blew except several days of tornado like weather. Sun was always in the sky which was totally blue. Twenty plus years later the sky is always cloudy, it is always rain or somewhat fresh water precipitation especially when the lower level wind changes its direction. Global warming with all the associated with that effects. We would get concentrated on one of them: fresh water loss to the outer Space vacuum. Briefly we will remind the readers that the CO_2 is one of the heaviest gases of the air blend. Its density is 1.97 g/m^3 [1]. The average air gas blend density is 1.22 g/m^3 [1]. Therefore the air CO_2 is covering the Ground. The Ground is the natural trap for all falling fresh water: rains, meting snow, ice, etc. Ground is the start for all creeks, rivers, lakes and ponds [1]. In the southern US states the Ground temperature in summer exceeds water boiling temperature under the normal pressure. The air CO_2 selectively absorbs the Sun infra red energy converting it to heat energy and the air CO_2 is covering the ground, the refuge for the fresh water. Therefore, water is boiled there and no water comes to where it is supposed to come - to rivers, lakes and ponds. Even without boiling in the Ground fresh water vapors are produced enormously and enrich the air. In general, NASA has investigated the effect of the Global Warming due to the factors discussed above and the additional factors. Air CO_2 is the same CO_2 which naturally absorbs Solar infra-red energy and converts it to heat. Global increase of temperatures fro 2-6^oC is proposed by NASA [30].

There is the Governmental picture of the fresh water reserves on our planet Earth (Fig.3). The air thickness is only 400 miles and the air is attached to the Ground by the Gravity force. The other side of the Earth atmosphere is the Space vacuum above the air layer wide only as 400 miles above the Ground. Therefore the water vapors are sucked by the Space vacuum as above. In 2010 NASA has discovered plenty of ice on the dark surface of the Moon (Space cold). Compare the diameters of the Moon and the Earth. Now you might possibly understand my concern (Fig.4). None in the Governments tells you about the coming danger: I might guess that in 10-25 years from now there will be a great shortage of the fresh water on Earth, I am not a Medium to predict that, but the signs of that are obvious. No fresh water means no livestock and no crops production. Global starvation. People will kill for the hamburger and the glass of fresh water. The remedy is obvious - to reduce air CO_2 level to somewhat like the air CO_2 level was on or before 1900 or the intensive petroleum discovery, recovery from the Ground and distillation in refineries to get the petroleum products Gasoline (C_7 to C_9) and Diesel fuel (C_{10}-C_{15}) for burning in the Gasoline and Diesel fuel engines to form the air CO_2. The way of doing that is the replacement of the products of the petroleum distillation by the carbon negative fuels.

We offer herein the explanation how we have reached that elevated carbon negative acetone manufacturing using our constructed Acetogen biocatalyst compared to the known the ABE process of acetone manufacturing using the engineered strains of C. acetobutylicum. Acetogens do not have known regulation for the expression of the synthetic genes encoding acetone biosynthesis. The artificial metabolic pathway common for eukaryotic cells making acetone from acetyl-CoA was engineered in the biocatalyst. Engineered strain demonstrated stable continuous syngas fermentation for about 25 days in the five independent runs. Similar biocatalyst performance was achieved on the combined CO_2/H_2 atmosphere. Each such fermentation could be run longer if needed. Continuous fermentations are cost-wise more beneficial compared with fed-batch fermentations. Continuous fermentation increases efficiency of the capital equipment use from ~35 to about 75% because owing to shortening time waste for inter cycle maintenance as the mandatory part of any fermentation process [16].



Planet Water Reserve

Water in, on, and above the Earth
Liquid fresh water
Freshwater lakes and rivers
Howard Perlman, USGS
Jack Cook, Adam Nieman
Data: Igor Shiklomanov, 1993

http://ga.water.usgs.gov/edu/earthwherewater.html

Fig.3. Fresh water reserves of the planet Earth [29].

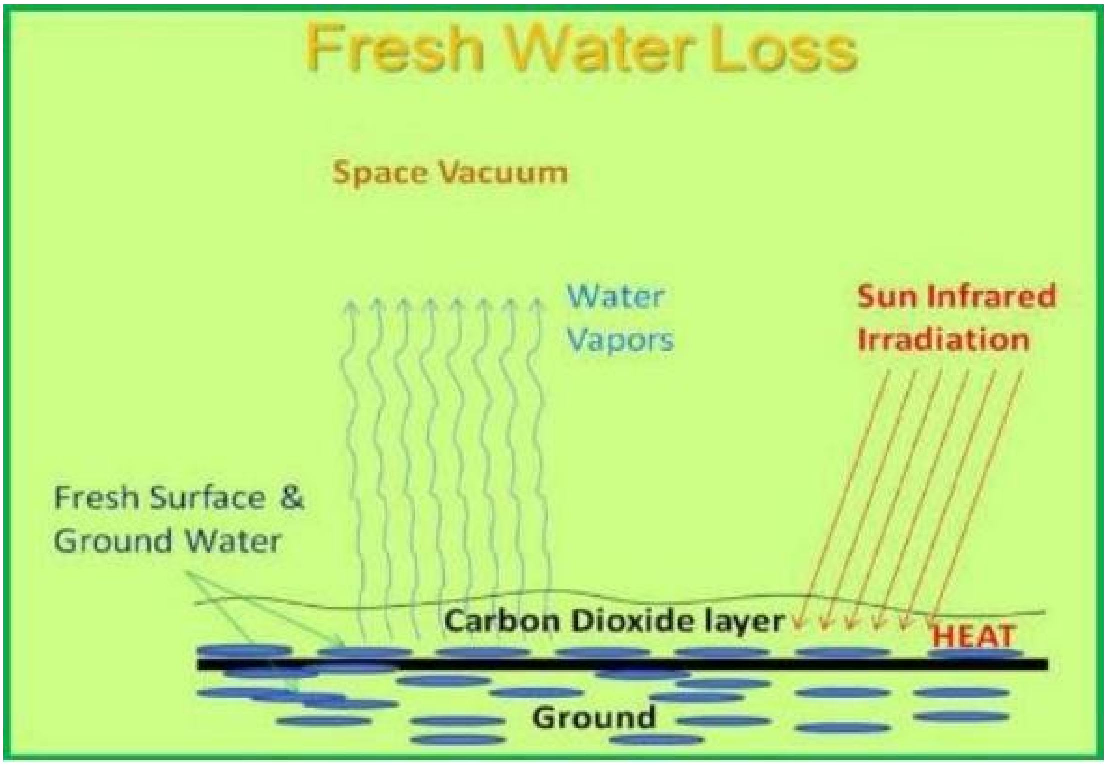


Fig. 4. Loss of fresh water from Earth to the Space vacuum due to the elevated air CO_2 concentrations [1].

As stated before, the war started by SHELL which attempted to kill the Author in 2018 has to be continued by the Author who offers now the new generation of the gas stations supposedly distributed Nationwide based on the attracted capital investment. The new gas stations are presented in the Gig. 3. Fig. 3 depicts the overview of the building of the new gas station in the left upper corner. The plan of the organization of the new gas station is showed in the right upper corner of Fig. 3. Below in the left bottom corner you will see the plan of the sea water distillation boat powered by the DC powerful motor obtained from the decomposing submarines with the modern powerful solar panel above said boat to provide enough power for charging of the alakaline batteries purchased from the shipyards as the DC motors above, for running the sea water distillation process and for powering the DC motor as above to make the boat independently movable. In addition to that, the modern solar panels above said sea water distillation boat have to provide enough power for the disposable bottles manufacturing process to make the process of the distilled water manufacturing complete. At the bottom right part of Fig.3 you might see the Ground facility for storage of the distilled water boats. The transportation boats have the modern solar panels and the alkaline batteries as stated above to power their DC motors as described above for moving the manufactured disposable distilled water to said Ground based storage facilities

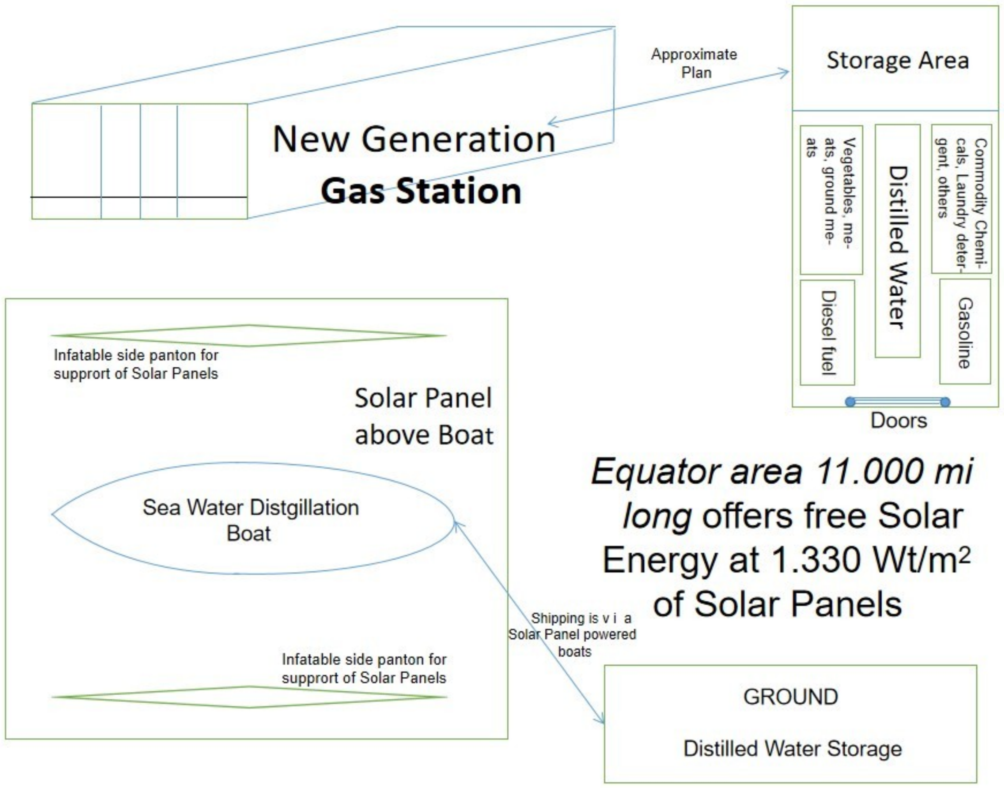

Approximate Plan
Storage Area
New Generation
Gas Station
Vegetables, me-ats, ground me-ats
Distilled Water
Commodity Chemi-cals, Laundry deter-gent, others
Diesel fuel
Gasoline
Doors
Infatable side panton for supprort of Solar Panels
Solar Panel above Boat
Sea Water Distgillation Boat
Equator area 11.000 mi long offers free Solar Energy at 1.330 Wt/m2 of Solar Panels
Shipping is v i a Solar Panel powered boats
Infatable side panton for supprort of Solar Panels
GROUND
Distilled Water Storage

Fig. 5. New generation of the gas stations offered in this article as the next Author's step in response to the war started with the Author by SHELL which has committed the attempted murder of the Author in 2018 (the HPD report on the Author's corporate car totaling by the SHELL hired Mexicans on their Toyota Tundra heavily loaded with steel tubes truck on December 10 2018).

It is paramount to specify herein in this original article that all the transportation needs of the holding the Author has now, and said holding has acquired Microbial Biocatalyst international, Inc. And Inorgcarbdiesel, Inc. Listed herein as the places to work for the Author currently, are performed either on the Carbon Negative fuels or on the solar panels if the transportation requires the movement over the sea areas. For that purpose the boat engines are the DC engines the Author got from the US Shipyards from the decomposed submarines recently. From the same source the Author got the alkaline batteries complementary to the solar panels powering the bioreactors, lower power devices, boats, etc. To make sure the operations do not stop for the night time periods. This is done for the overnight operations at all levels of the holding the Author has now to make sure the operations in the holding are 24/7/365 with no any interruption by the international petroleum corporations which have started the war against the Author in 2018 as stated herein in the Declaration section of this original article. This is the other response the Author has made to SHELL and other international petroleum corporations after the Author’s attempted murder committed by SHELL in 2018.

CONCLUSIONS

1. The Author outlined his understanding of the environmental crisis Earth went during XX-XXI centuries with the intensive use of products of petroleum distillation.

2. The Author specified that he is at the top of the people intended to save the normal life on Earth via the replacement of the International Petroleum Corporation s by the businesses producing Carbon Negative fuels.

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Chapter 6. Carbon Negative Mixes Comprising 1,1-Dibutoxybutane

Abstract

Recovery of petroleum and its distillation at the refineries to get Gasoline (C_7-C_9) and Diesel fuel (C_{10}-C_{15}) burned in Gasoline and Diesel cars / trucks, airjets, etc. both lead to the Global Environmental Catastrophe in 10-15 years from now which the humankind will not survive. The fresh water outage is coming at that time, no crops and livestock production follows that. Global Starvation is coming. The Author plans to save the Earth's fresh water by developing Nationwide manufacture of the Carbon Negative replacements of Gasoline and Diesel fuel and add additional distilled water and the Carbon Negative genetically engineered foods to help the humankind pass said .environmental crisis. The Author plans to increase the investor's funds to organize Nationwide the network of the new type of gas stations selling not only Carbon Negative fuels but additionally to that the genetically engineered foods for home cooking and essential household items to save time to the valued customers preventing them to drive additionally. The on-line ordering system to provide additional goods is planned. The environmental problem outlined has the radical solution pending: change of the international petroleum corporations to Carbon Negative corporations.

Key words: Carbon Negative fuels; distilled water from sea water; genetically engineered Carbon Negative foods; new type of the gas stations; the on-line ordering system.

Introduction

Recent changes at the top of the US Executive administration have been combined with the not very wise decisions to cut down the petroleum imports from the Russian Federation. The free market economy of the US immediately reacted by skyrocketing of the Gasoline and the Diesel fuels prices at the gas stations to the levels affecting all other prices nationwide. For instance the cost of the TX DL skyrocketed from $11 USD in 2011 to $33 USD in 2023 (the coefficient of recalculation all the prices this year vs. year of 2021 and below that year is above 3 - the rule of the market economy per the _US Constitution. That coefficient 3 and above is typical for the increase of other prices Nationwide as the major price-wise rule of the free market economy [21]. Subsequently, the proper running of the US economy is possible only with the very wise decisions at the Executive Branch of the US Governmental administration. We offer herein the Carbon Negative replacements of the Gasoline and of the Diesel fuel manufactured from petroleum by the very similar fuels manufactured from the air CO_2 to reduce the noted herein Global environmental crisis on Earth. Nationwide replacement of the technologies based on the use of petroleum as the source of chemicals and the fuels by the manufactured by our Carbon Negative corporations the Carbon Negative technologies and their products is absolutely essential since the Earth has passed the level of the air CO_2 400 ppm, the “Point of No Return” per the NASA discoveries of 2010 [21]. Now the air CO_2 exceeds 450 ppm .and goes above that based of the wide distribution of the intensive transportation based on the use of petroleum-derived Gasoline and Diesel fuels [21].

The Author has written much about the Carbon Negative replacements of Gasoline or Diesel fuel manufactured by international petroleum corporations from petroleum via its distillation at the refineries the number of which is around 80 in the continental US and each of them operating produces a lot of air CO_2 [5-16,19,21]. Now there is the time to elaborate this topic more precisely.

The combustion energy of fuel butanol is represented by the following numbers for the isomers of fuel n-Butanol shown below as indicated in [6,7]: 1-Butanol: −2.671 kJ/mol, 2-Butanol: −2.661.1 kJ/Mol, Isobutanol: −2.662.6 kJ/Mol, Tert-butyl alcohol: −2.644.8 kJ/Mol. The combustion energy of Gasoline is slightly higher, it is around -3.200kJ/Mol 64 [6]. The combustion energy of DAA or Mesityl oxide is -3.600 kJ/Mol [6]. So, their inclusion into the fuel mixtures increases the total combustion energy to the levels of petroleum Gasoline and above that.

In addition to that the octane number of the most prosperous fuel Isobutanol is 98 [1,2], so its addition to the fuel mixtures above 35% (vol/vl) increases the total octane number of those fuel mixtures. Therefore, adding the fuel Isobutanol [18] to the mixture of other Carbon Negative fuels will substantially increase the overall summary octane number of said mixture. Besides that the viscosity of pure fuel Isobutanol prevents it safe use alone at the outside temperatures below 34°F [21]. That is why we offer this Carbon Negative mixtures comprising 40% of fuel Isobutanol, 20% fuel 1,1-butoxybutane [37], 20% Mesityl oxide [24,34,35] and 20% fuel Diacetyl alcohol (DAA) [15-17, 73.29]. This will eventually compete with the products of the international petroleum corporations originated from petroleum as we discuss below its causing the outlined Global Environmental crisis related to the increase of the air CO_2 content [21,24].

Concerns of the lower total combustion value of the Carbon Negative fuels [38] made us think about increasing the molecular mass of certain mixture components anticipating in result the increased combustion heat value as that was anticipated by us. We have decided to use instead of fuel n-Butanol its product of the Guebert condensation [37]. The use of Carbon Negative fuel n-Butanol has been known already [39].

Indeed the use of 1,1-dibutoxbutane [37] increased the total combustion value of our Carbon Negative mixes we offer to the customers at the new the of the gas stations as we have anticipated that.

Fig. 1. presents the picture of the 1,1,-dibutoxybutane.

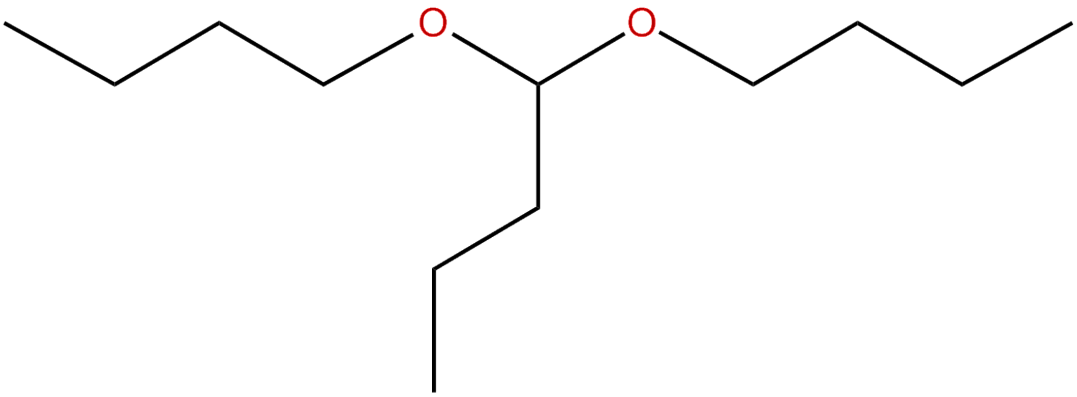


Fig. 1. Chemical formula of the recommended herein Carbon Negative 1,1-dibutaneoxybutane - the replacement of the Carbon Negative fuel n-butanol.

As you could see from this picture the molecular mass of 1,1-dibutoxybutane is 202,388 which is much higher than for the fuel Carbon Negative n-Butanol [39]. Therefore such replacement of fuel n-Butanol [39] with the 1,1-dibutanoxybutane has resolved our noted herein low molecular weight of Carbon Negative fuels concerns.

Therefore, we have decided to sacrifice our both corporate cars for the test driving them on the highway and in the city of Brownsville, TEXAS, to see if any damage could possibly happen to the cars and especially their engines operated with the Carbon Negative mixture of the fuel Isobutanol, fuel Diacetyl Alcohol (DAA), fuel 1,1-dibutanoxybutane and fuel Mesityl oxide []. The manufacturing price of the DAA manufactured from the air CO_2 is approximately $0.35 per gallon as we have estimated that during our calculations at the corporate manufacturing facility we did before [21]. As you already know the manufacturing process of DAA from the fuel Acetone [3] is the condensation of the two acetone molecules over the alkaline catalyst per [4]. It gives fuel Diacetyl alcohol (DAA) at the manufacturing cost of $0.02-0.03 per gallon. The combustion energy of the fuel DAA is approximately -3.573 kJ/Mol [21] as compared to the combustion energy of the Diesel fuel of -808 kJ/Mol [Bio-diesel and Thermodynamics - Chemistry LibreTexts] which substantially exceeds the typical for the diesel fuel combustion engine energy release as the mechanical energy of driving and corresponds to the higher engine power under the given engine mechanical dimensions, probably because of the increase of the combustion mixture explosive pressure. The fuel Mesityl oxide combustion energy elevates that energy of the Diesel fuel [41] and we have decided to test the said mixture of the Carbon Negative fuels comprising as above 40% of fuel Isobutanol, 30% fuel 1,1-butanoxybutane [37], 10% Mesityl oxide [24,34,35] and 20% fuel DAA. That high octane number of that .mixture composing 98 has been tested on the Diesel truck 2022 RAM 3500 to replace the Diesel fuel of the petroleum origin.

However, we are not the explosion experts to discuss this herein [21]. Indicated elevation of the explosive pressure in the case of using Diacetyl alcohol (DAA) and Metsityl oxide happens in the purchased manufactured diesel vehicles. The increased molecular weight of 1,1,-dibutoxybutane has resolved our noted herein concerns of the lowering of the combustion energy of the resulted Carbon Negative mixture. Therefore we are very confident that until the manufacturers do the adjustment of their vehicles it might be very reasonable to keep checking the engine combustion chamber gaskets very often to notice any damage by the qualified dealership mechanics or to notice sudden loss of engine power with the need to get the engine to the qualified dealership mechanic for repairs of damaged combustion chamber gaskets [6,21]. We are confident that the anticipated by the Market Economy prevalence of the Carbon Negative fuels over the fuels originated from petroleum will affect the engineering and quality control process of all the diesel cars / trucks manufacturers to save the time for your valuable customers for said checking of the engines and the engine gaskets.

Biocatalysts used to manufacture the Carbon Negative fuels have different synthetic genes introduced by the means of genome tailoring using the unique Electrotrasformation / Electrofusion Generator developed by the Author when he still was in the Russian Federation [18,19]. The fuel Carbon Negative mixture we have used herein is widely recommended by us to replace the Gasoline manufacture by the international petroleum corporations from petroleum. That will be done itself by the anticipated dominance of the Carbon Negative corporations we have recommended to resolve thew Global Environmental crisis on Earth and describe herein.

Our biocatalyst making fuel Isobutanol has several genetically engineered genes for that purpose [18,20]. The fuel Isobutanol bioisynthesis by this strain is shown in Fig. 3

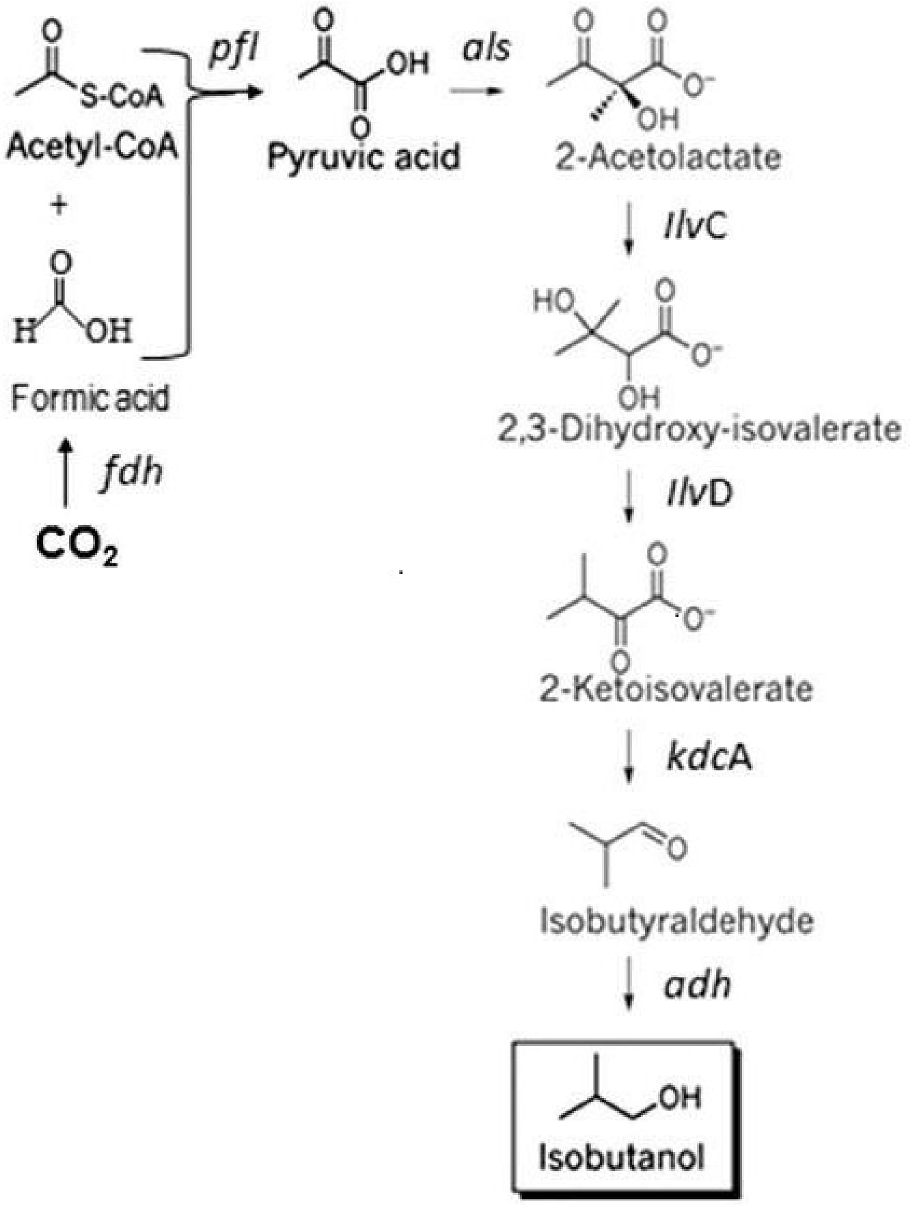


Fig. 3. Genetically engineered fuel Isobutanol pathway in our biocatalyst [18,20].

Fuel Isobutanol, the perfect Carbon Negative fuel, has a shortcoming bringing it to the zero use: high viscosity, tendency to form gel at temperatures below 0°C (or 34°F) [21-23]. The fuel Isobutanol has viscosity cP or mPa•s @ 20°C 3.102 [24]. Forming "gel" in the fuel line is absolutely not acceptable and has to be avoided by any means like the use of Carbon Negative mixtures recommended herein. The engines have to run perfectly at any reasonable temperatures. If in the State of TX the low temperatures are typical for only a few months, then in the Northern States the winter has low air temperatures for a much longer time (for instance, winter in New Hampshire).

Therefore, there has to be the tool to eliminate the fuel viscosity to the levels acceptable at the low air temperatures below 0^oC. This remedy is found already. Mixing of 40 % (vol/vol) of Carbon Negative fuel Isobutanol with 20 % (vol/vol) of DAA, which we produce Carbon Negative from condensing of the two Carbon Negative acetone molecules over the alkalyne catalyst [25,26], and 30% (vol/vol) of fuel 1,1-butoxybutane [37] and 10% (vol/vol) Mesityl oxide [24,34,35].

Let me emphasize herein again the Carbon Negative fuels as the replacements of Gasoline and Diesel fuel manufactured from petroleum by the international petroleum corporations. Earlier we have published the DAA as the Carbon Negative replacement of the Diesel fuel [42]. DAA might be produced by the condensation of the two Acetone molecules over the alkaline catalyst [4]. The explosion energy of DAA is way above the explosion energy of the Diesel fuel manufactured by the major international petroleum corporations from the petroleum [27,28]. Therefore, we have to pray that our customers will check their engines regularly with the qualified mechanics for the damages which potentially might be caused by the use of DAA in the existing trucks. Therefore the manufacturers of the diesel trucks will have to make certain changes to the design of their trucks to accommodate much higher explosion energy of added part of DAA. This might be unnecessary however their manufacturers have to acknowledge the massive use of the carbon negative Gasoline replacement and make certain changes improving the mechanical resistance of the gaskets in the engine compartment. Not to mention herein that the international petroleum corporations now spend $1.75 to manufacture 1 gallon of Gasoline or 1 gallon of the Diesel fuel from petroleum by the petroleum distillation ant their refineries producing air CO_2. That eventually substantially affects the prices of the Gasoline and the Diesel fuel manufactured from petroleum [6] s we have notice this summer of 2023 when Mr. President has canceled his overseas contacts and the Gasoline and the Diesel fuel prices skyrocketed to above $5 per gallon each, and this is the cost of existence of the international petroleum corporations on the territory of the US.

Fig. 4 explains how our Acetogen biocatalyst synthesized Carbon Negative fuel Acetone from the air CO_2 [29]. Resulting Carbon Negative fuel Acetone is used for the manufacture of DAA by the condensation of the two Acetone molecules over the alkaline catalyst [4].

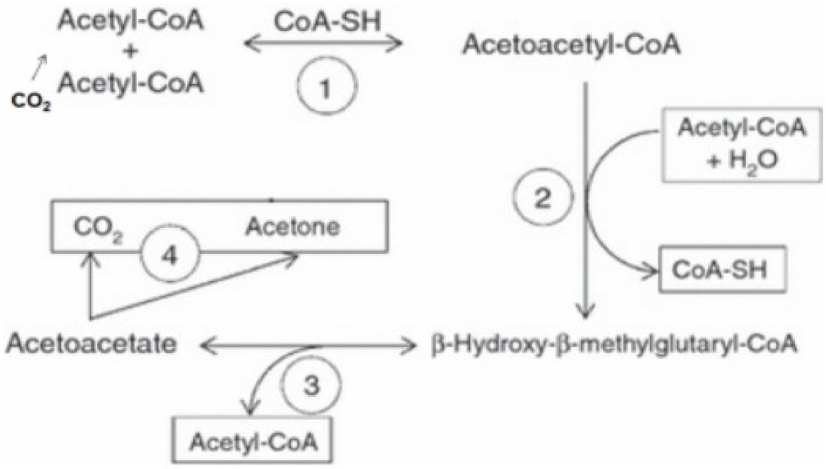


Fig. 4. Biosynthesis of fuel Carbon Negative acetone from the air CO_2 [29].

The following chemical reaction allows us make certain calculations per the Acetone yield [29]:

$$12\ CO_2 + 56\ H_2 = 3.6\ \text{Acetone} + 0.06\ \text{Cell Carbon}$$

We have to note that our corporate manufacturing facility is the grid-independent and gets all its electric energy solely from the solar panels covering all the area over our bioreactors and accopmpnying with the set of the alakaline batteries from the US shipyards for the 24/7/365 operations with no interruptions to get connected to the grid to power the process of the industrial importance . We used our original not having any World's analogs gas blend fermentation vessels [1,3,5,7-18] to feed our genetically engineered biocatalysts with the gas mix of the composition 20% (vol/vol) of the air CO_2 and 80% (vol/vol) of the H_2 manufactured by ourselves at the cost of about $0.02 per 500 moles (0.5 kg). The bottom of each vessel was covered with the gas Pall spargers providing the size of gas blend bells of around 0.5 micrometers. The overall fermentation work went extremely well with the high microbial densities of the genetically engineered strains of Clostridium sp. MT896 and of Clostridium sp. MAceT113 [29]. When the acetone reached the concentration of about 8 - 9 g/l in each fermentation block of our fermentation plant, the fermentation was deceased and the acetone was collected from the fermentation fluid. Evaporated acetone was collected and then subjected to the treatment under the alkaline catalyst per the US Patent 1550792A [4] to reach the production of the DAA. At the concentration of the Diacetyl alcohol (DAA) 97% it was collected, dehydrated from the trace amounts of water and used as the diesel engine fuel. So, now we are ready to offer to the customers the replacement of the diesel fuel, manufactured in the US solely from the air CO_2.

In testing we have used the Carbon Negative fuel mixture composed of 40% (vol/vol) of fuel Isobutanol, 30% fuel 1,1-dibutaneoxybutane, 30% Mesityl oxide [24,34,35] and 20% fuel DAA.

Materials and Methods

Besides the gas mix we used in our horizontal bioreactors we have used our proprietary horizontal fermentation vessels or as we call them bioreactors [Tyurin MV (2023) New Bioreactor for Carbon Negative Gasoline and Diesel Fuel Replacements. Advance in Environmental Waste Management & Recycling. V.6 (1), 402-409].

The most important elements of said proprietary horizontal bioreactor are shown in the following picture (Fig. 5). Important that the gas feeding has to be assembled in the way to provide uninterrupted supply of the 0.5 micrometer gas mixture bubbles to the biocatalyst of it starts decaying with no gas mixture food. We do not anticipate any such interruptions in the technological process and have 39 0.5 micrometer stainless teel diffusion stones in said horizontal bioreactor to provide the uninterrupted feed to our biocatalyst we have made by the genetically engineering methods as described [ ]. Per the immerced in the liquid fermentation medium “perimeter” of said horixontal bioreactor we have the three stainless teel diffusion stones to ensure the uninperrupted gas blend feeding.

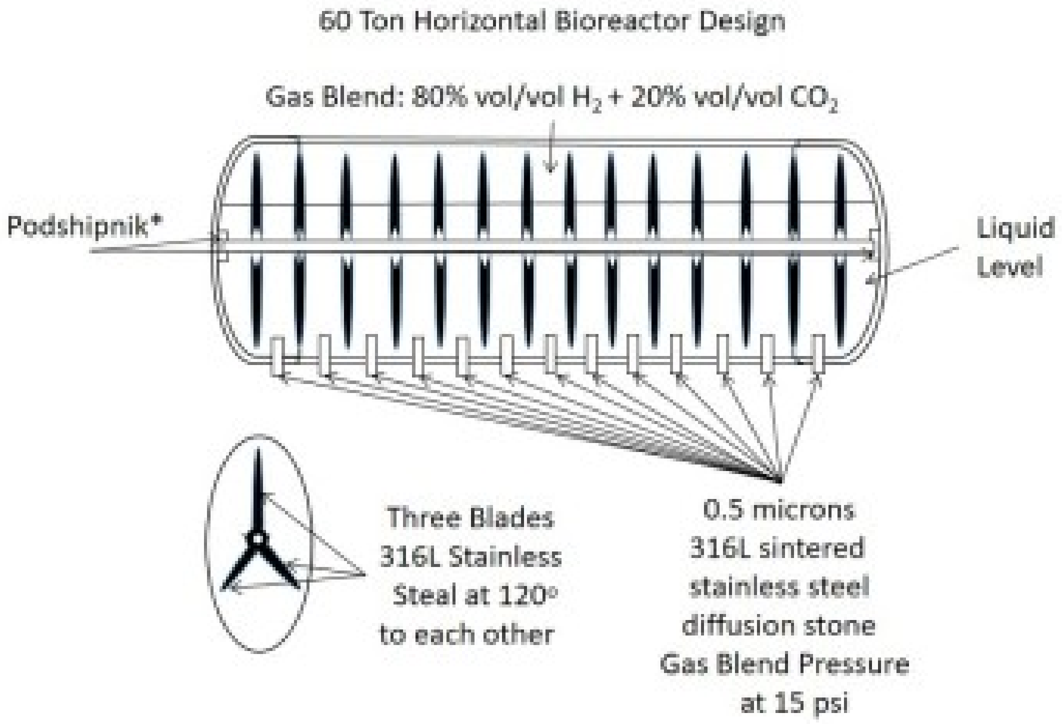

60 Ton Horizontal Bioreactor Design
Gas Blend: 80% vol/vol H_2 + 20% vol/vol CO_2
Podshipnik*
Liquid Level
Three Blades 316L Stainless Steal at 120° to each other
0.5 microns 316L sintered stainless steel diffusion stone Gas Blend Pressure at 15 psi

Fig. 5. Our proprietary horizontal 60 tosn bioreactor.

The composition of the fermentation medium we use might be different for any kind of the Carbon Negative biofuel (proprietary compositions) but in most cases we use the following liquid medium for the biocatalysts, g/l:

The liquid medium for the growth of Acetogens LM, g/L:

$NaHCO_3$	3.5
KH_2PO_4	2.0
NaCl	0.4
NH_4Cl	0.4
$MgCl_2$ x $6H_2O$	0.33
$CaCl_2$ x 2 H_2O	0.05
Resazurin	0.001
Yeast extract	2.0
Caseine trypton	2.0
Nicotinic acid	0.025
Cyancobalamin	0.025
Para-aminobenzoic acid	0.025
Ca D-pantotenat	0.025
Thiamine x HCL	0.025
Riboflavin	0.025
Lipoic acid	0.015
Folic acid	0.0001
Biotin	0.0001
Pyridoxal - HCL	0.005
Sodium nitrilotriactetate	0.0075
$MnSO_4$ x H_2O	0.0025
$FeSO_4$ x 7 H_2O	0.0005

$Co(NO_3)_2$ x $6H_2O$	0.0005
$ZnCl_2$	0.0005
$NiCl_2$ x6H2O	0.00025
$CuSO_4$ x $5H_2O$	0.0005
$AlK(SO_4)_2$ x12 H_2O	0.0005
H_3BO_3	0.0005
Na_2MoO_4 x 2 H2O	0.0005

Distilled water to the volume of 1 Liter

pH 6.5

adjusted by the hydrochloric acid before the autoclaving of said liquid medium at 0.55 atm fro 35 min right in the 60 tons horizontal bioreactor. Imagine the volumes we are operating constantly with to get said biofuels.

As Fig. 5 shows, in our system we used 42 (14 per the length of the horizontal bioreactor, three by the “perimeter” (the 70% of the horizontal bioreactor are filled with the liquid medium), the total number of the impeller used is 42) s causing random distribution of the gaseous blend over the bioreactor volume we have used. Said gas blend was composed of 80% (vol/vol) H_2 and 20% (vol/vol) of CO_2. This is very important that said CO_2 was extracted from the surrounding air. The process of said $C0_2$ extraction is proprietary and we will describe it in our subsequent publication since we do not have enough money for the US patenting process and trust that the publications in the peer-reviewed Journals totally replace the related patents and the published articles have to be always overcome by the patents of competitors if any. The horizontal bioreactor shown in Fig. 5 has been filled by the nutrient medium by 70%. The rest of the bioreactor space was for the used by us gas blend as above. It is important to note that each impellers used were composed of the properly balanced for the rotation three polished stainless 316S steel blades at the speed of 450 rpm. The pressure of the gas blend used in the horizontal bioreactor shown in Fig. 5 was 15 psi. The total number of said diffusion stones was 42 per each bioreactor we have used.

The shape of the bioreactor blades is very similar to that of the air jet aircrafts turbines shown in Fig. 6 below but the exact shape of said stainless teal blades is proprietary as is not shown herein.

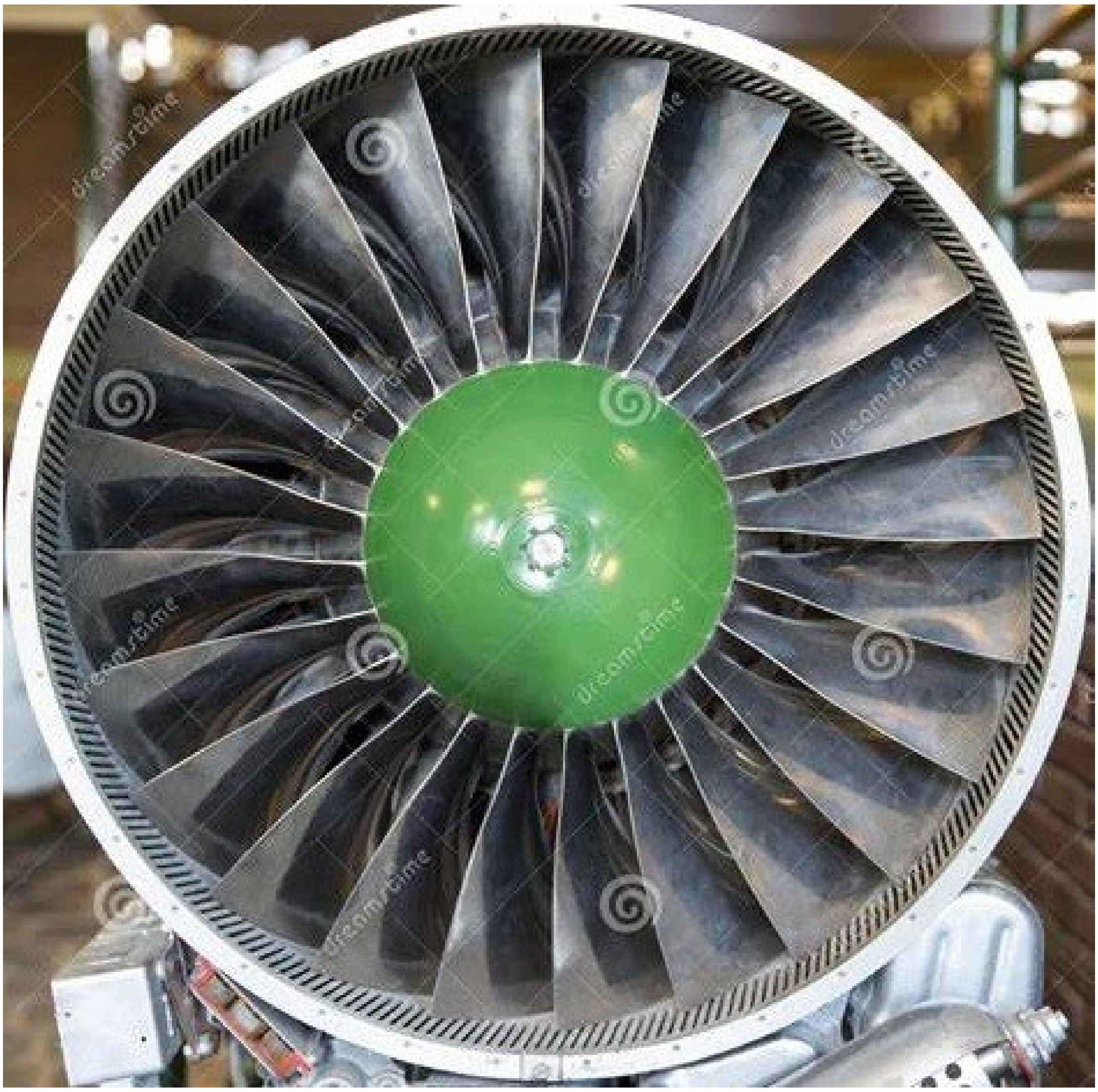


Fig. 6. The shape of the impeller blades in our bioreactor is very similar to that of the air jet turbines blades but it is proprietary and it will be discussed in detail in a separate article.

Fuel Isobutanol was manufactured using our genetically engineered biocatalysts as that is discussed in [18]. the fuel DAA was created from the Carbon Negative acetone manufactured before using the technology we have already described [29] by the condensation of the two Carbon Negative acetone molecules over the alkaline catalyst as described [29]. Said Carbon Negative fuel Isobutanol and the fuel DAA were used in the mixture with other

Carbon Negative fuels and that is sold to the customers. In case of fuel Isobutanol its known its relatively high viscosity causing problems in the cars / trucks fuel lines at low air temperatures if fuel Isobutanol was used pure. But the combination of it in the described mixture removes the high viscopsiuty problem. Said problem with elevated viscosity does not exist for the said mixture of the Carbon Negative fuels as we have discussed above: 40% (vol/vol) of fuel Isobutanol, 30% fuel 1,1-dibutaneoxybutane, 30% Mesityl oxide [24,34,35] and 20% fuel DAA.

It is important to note that the impeller blades were placed on a 316S stainless teal shift fixed in our horizontal bioreactor by the Podshipniks [43]. Said Podshipniks are the specifically designed fro handling the rotating shafts and properly manufactured for handling and rotation elements providing long and productive life for shift with the impellers shown in Fig. 5 and used in our horizontal bioreactor. Podshipnik is shown in Fig. 6.

Fig. 6. Podshipnik used in our horizontal bioreactor [30,43].

It is important to note that the Author was assassinated by SHELL after offering SHELL commercialization of his proprietary technology of Gasoline manufacturing from the air CO_2 (the Declaration of Interests Statement section of this original article). As the response the Author has came up with the proposition to displace the existing petroleum corporations operating in the USA by the corporations manufacturing Carbon Negative fuels from the air CO_2 in sincere Author’s intent to bring the air CO_2 content to the level of the year 1900 or just before the active petroleum fields discovery and exploration followed by the distillation of petroleum in the refineries itself producing the air CO_2 [6]. In response to that the Author has made this article using the US Constitutional freedom of speech [17].

It is also important to mention herein that the Carbon negative fuels were sold at the new type of the gas stations shown in Fig 7. below as the intelligent response of the Author to said his attempted murder by SHELL in response to offer of the Author to commercialize his proprietary technology of Gasoline manufacturing from the air CO_2 to resolve the ecological crisis the international petroleum corporations selling the petroleum originated fuels have brought our planet Earth.

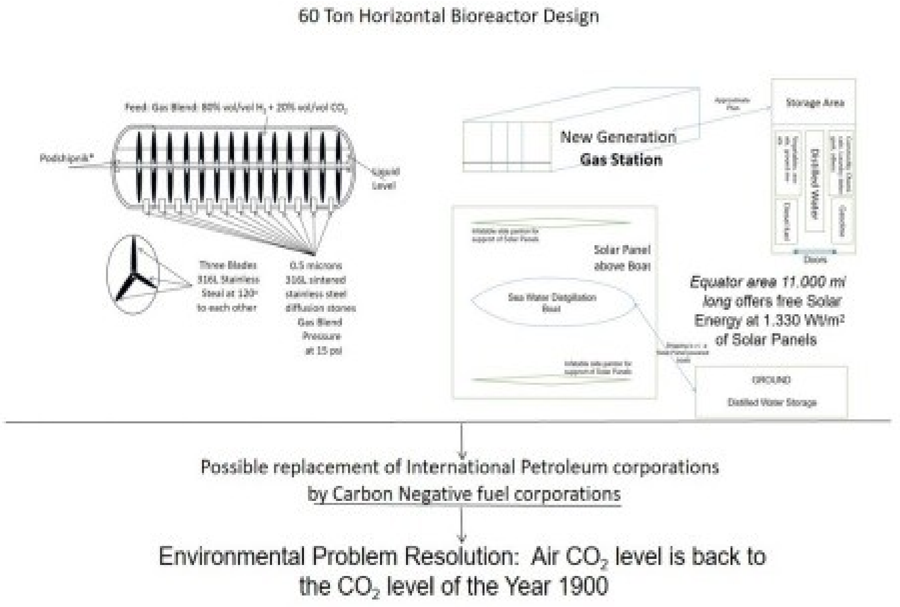

60 Ton Horizontal Bioreactor Design
Feed: Gas Blend: 80% vol/vol H2 + 20% vol/vol CO2
Podshipnik*
Liquid Level
Three Blades 316L Stainless Steal at 120° to each other
0.5 microns 316L sintered stainless steel diffusion stones Gas Blend Pressure at 15 psi
New Generation Gas Station
Storage Area
Distilled Water
Diesel fuel
Gasoline
Doors
Solar Panel above Boat
Sea Water Desalination Boat
Equator area 11.000 mi long offers free Solar Energy at 1.330 Wt/m2 of Solar Panels
GROUND
Distilled Water Storage
Possible replacement of International Petroleum corporations by Carbon Negative fuel corporations
Environmental Problem Resolution: Air CO2 level is back to the CO2 level of the Year 1900

Fig. 7. The intelligent response of the Author to his attempted murder committed by SHELL (the HPD report is available for reference).

We have tested our Carbon Negative fuels of the set of corporate vehicles we have sacrificed for that purpose even without knowing the results of the testing performed but with the great hope that all said vehicles will survive said testing and will be used again but with only the Carbon Negative fuels. For said testing we have sacrificed corporate .2022 Toyota Camry, Peugeout 3008 and the diesel truck 2022 Chevrolet Silverado 1500 Duramax Diesel. The gas mileage in the town of Brownsville and on the highways was meticulously recorded by the respective chauffeurs Certified mechanics from the Toyota, Peugeot and Chevrolet dealerships were invited to the corporate garage of our corporations to meticulously check 1)stated cars driving and 2) any mechanical damages, especially in the engine compartments, like gaskets on the engines anticipating damage of some of them after at least 10,000 miles of testing. The testing was performed for 20,000 miles for each test vehicle. The records on the gas mileage for all types of 280.tested cars are discussed herein.

We have mentioned herein that we sell our Carbon Negative fuels at the new type of the gas stations (Fig. 7) combining the sales of the Carbon Negative fuels and the sales of the certain goods for which the valued customers had to drive additionally to Walmart and to the grocery stores. And that we offer along with the ordering (includes also the on-line ordering) of the goods the customers could not find at the new type of the gas stations but need and had to drive to the next to the gas stations stores to purchase them. As we have noted before [21] the Environmental crisis as the result of the international petroleum corporations selling the fuels originated from petroleum will result in shortage of the fresh water on Earth due to its enormous evaporation to the Outer Space vacuum [21]. Therefore the sales of the distilled water by the new type of the gas stations is a mandatory process for us - we want to make as easy as possible the time of converting the World's economy from the dominance of the international petroleum corporations to the set of Carbon Negative fuel and genetically engineered foods corporations. As we have stated herein our intent is to ensure the valued customers will find the new type of the Carbon Negative gas stations a valuable option to save their time for not visiting on their cars the Walmart and the grocery stores. Certain foods for consumers there were prepared using the genetically engineered fungi (to be approved for the Nationwide use). We use the Ordering option for the goods not currently sold at the new type of the gas stations but had to be added fro sales there to save the time for our valuable customers. For that purpose the sales people took the orders and there was also the on-line ordering system.

Results

The Author was really surprised when all his planned herein in this original article experimental parts worked well as described before [7-10, 12-14] with the Carbon Negative replacements of Gasoline and Diesel fuel.

Data on testing of the Carbon Negative fuel using real Gasoline and Diesel fuels vehicles. Results of checking by certified *mechanis from respective car / truck dealerships on no any visible defects or vehicles misbehavior while driving*

The certified mechanics from the respective car / truck dealerships meticulously tested the respective corporate cars at the corporate manufacturing site and drove said cars on the roads nearby the manufacturing site meticulously to reveal any damages caused by the replacement of the Gasoline or the Diesel fuel by the suggested mixture of Carbon Negative fuels 40% (vol/vol) of fuel Isobutanol, 30% fuel 1,1-dibutaneoxybutane, 30% Mesityl oxide [24,34,35] and 20% fuel DAA. Said mixture was also used to power the Diesel truck 2022 RAM 3500. The cars were placed on the treadmill with the device to check the engine emissions. No unusual exhaust gas emissions were ever tested and discovered in the exhaust gas of all tested vehicles.

No unusual emissions in the cars exhausts

No unusual engine emissions were noted by said mechanics for all tested corporate cars. Then the mechanics made the test drives of the each said vehicle. No any mechanical or any other damages to the engines of the all said cars were ever revealed upon said thorough testing. Test drives of each said vehicle by the certified mechanics did not reveal any abnormal driving behavior in any of said cars. The mechanics still did not make any further recommendations on the following use of the Gasoline and the Diesel fuel replacement leaving for the Author the possibility of reporting this very good news to the general public. The gas mileages of the cars used to test the mixture of the fuel mixture of Carbon Negative fuels 40% (vol/vol) of fuel Isobutanol, 30% fuel 1,1-dibutaneoxybutane, 10% Mesityl oxide [24,34,35] and 20% fuel DAA as the replacement of Gasoline were 37 mpg on the highway and 31 mpg in the city of Brownsville. You can easily calculate the average gas mileage from said numbers. But the overall picture looks to us very promising since the gas mileage even slightly exceeded the Gasoline from petroleum use mileage in Toyota Camry and Porshe Cayenne Turbo. Due to the limited number of the tested cars we cannot make any predictions for the other car makes and the cars made before the year of 2022. This will become the risk of the other car owners, who will decide to replace their Gasoline with the produced from the air CO_2 mixture fuel mixture of Carbon Negative fuels 40% (vol/vol) of fuel Isobutanol, 30% fuel 1,1-dibutaneoxybutane, 10% Mesityl oxide [24,34,35] and 20% fuel DAA. If you remember our corporate goal is to replace all the petroleum use by the use of the air CO_2, initially to resolve the issue of the transportation problems, substantially increasing the air CO_2 content via the air CO_2 accumulation and eventually to decrease the air CO_2 content causing the fresh water loss to the outer Space vacuum as stated before. The similar picture was seen if we used said mixture fuel mixture of Carbon Negative fuels 40% (vol/vol) of fuel Isobutanol, 30% fuel 1,1-dibutaneoxybutane, 10% Mesityl oxide [24,34,35] and 20% fuel DAA to fuel the Diesel truck 2022 RAM

3500: highway mileage 37 mpg, town mileage 35 mpg for the long testing time of 20,000.

Fuel efficiency of the new carbon negative replacement of the Gasoline and Diesel fuel

For the use of said mixture of Carbon Negative fuels 40% (vol/vol) of fuel Isobutanol, 30% fuel 1,1-dibutaneoxybutane, 30% Mesityl oxide [24,34,35] and 20% fuel DAA as the Diesel fuel replacement for over the 20,000 miles runs, the 5,000 miles old 2022 Shevrolet Silverado1500 truck was used for test runs on our carbon negative Diesel fuel for 20,000 miles.. The Diesel fuel mileage was achieved on the highway at the average diesel fuel mileage ~38 mpg, and at ~32 mpg driving in the city. The calculated the combined driving efficiency was about ~36 mpg. The Author does not take any risk in forecasting the Diesel fuel mileage behavior of the other diesel cars/trucks makes and per the mileage forecasting for the Diesel cars/trucks makes older than the year of 2022.

Discussion

NASA has stated in 2010 after measuring the air CO_2 content above 400 ppm that that was the "*Point of No Return*" to healthy environment on the Earth. Now the air CO_2 level exceeds 450 ppm. What that means and how do we pan to reduce the air CO_2 content to the level we have in our dreams - the air CO2 level of the year 1900 or just before the active discovery of the oil wells and fields and the massive petroleum production and use fore distillation to manufacture Gasoline and Diesel fuel by the international petroleum corporations [21].

The air CO_2 is the heaviest gas of the air gas blend having density of 1.22 $g/m^{3.}$ The air CO_2 density exceeds 1.97 g/m^3 [21]. Therefore by the gravity force the air CO_2 is covering the Ground. The Ground is the natural refuge for all kinds of fresh water: fresh water from rains, snow/ice melting, etc. The Ground is the place where from the creeks, rivers start from to go to the sea, lakes and ponds. With the air CO_2 excessively covering the Ground it produces much more fresh water vapors as that was in the year of 1900. In the Southern States of the US the temperature of the Ground reaches 100°C and up. The fresh water trapped in the Ground might even boil increasing the evaporation of the fresh water vapors to the air. The air is attached to the Ground by the gravity force. The average thickness of the air layer above the Ground is about 400 miles. The other end of said air layer is the outer Space vacuum. In 2010 NASA has found a lot of ice on the dark surface of the Moon. NASA has concluded that ice was captured by the dark surface of the Moon (-293°C) and the fresh water vapors came form Earth. The Moon worked as the “cold trap” for said vapors. Compare diameters of Earth and the Moon, thinking that the Moon is located in 200,000 miles distance from Earth [21].

What that means? Earth is wasting its fresh water to the Outer Space. How to stop it? This might be stopped by the stopping the air CO_2 production. Can we stop using the produced by the international petroleum corporations originated from petroleum fuels? Apparently the answer is NO. For that purpose we have developed our Carbon Negative fuel and food corporations and manufacture the Carbon Negative genetically engineered foods. Therefore we are offering the Carbon Negative fuels and genetically engineered Carbon Negative foods at our new type of gas stations instead of the widely used Gasoline and Diesel fuel manufactured by the international petroleum corporations from petroleum on the over 80 in the continental US refineries to distill said petroleum to the gasoline fractions (C_7-C_9) and Diesel fuel (C_{10}-C_{15}) and sold to customers Nationwide and World-wide.

The described for the Acetogen biocatalysts the new type of the horizontal bioreactor design has the three gas blend diffusion stones per the perimeter of the bioreactor to ensure the even distribution via the total number of said diffusion stones was per each bioreactor of the feeding Acetogen biocatalysts with the gas blend components to feed the biocatalysts. Fig. 5 shows only one of the three said diffusion stones. Our horizontal bioreactor for the manufacture of the Carbon Negative fuels has three said diffusion stones per the perimeter of the immersed to the medium part thirty inches apart from each other with the total number of said stones 42 [30].

The Author suggests his own Carbon Negative fuels sold at the new type of gas stations shown in Fig. 8.

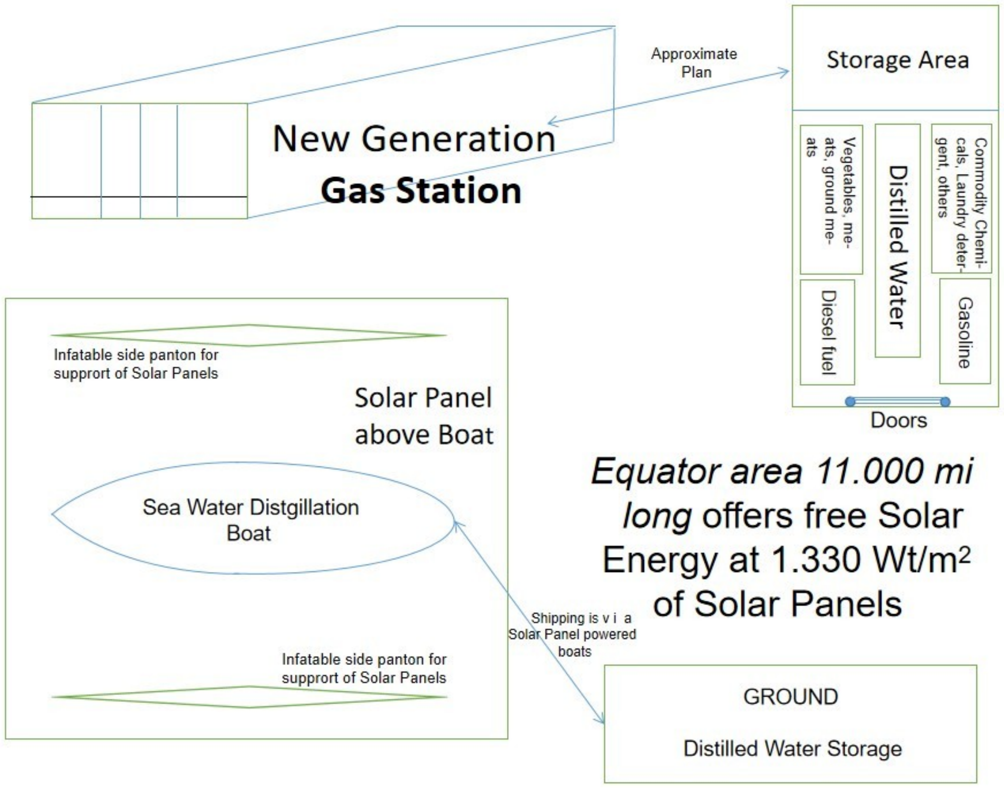
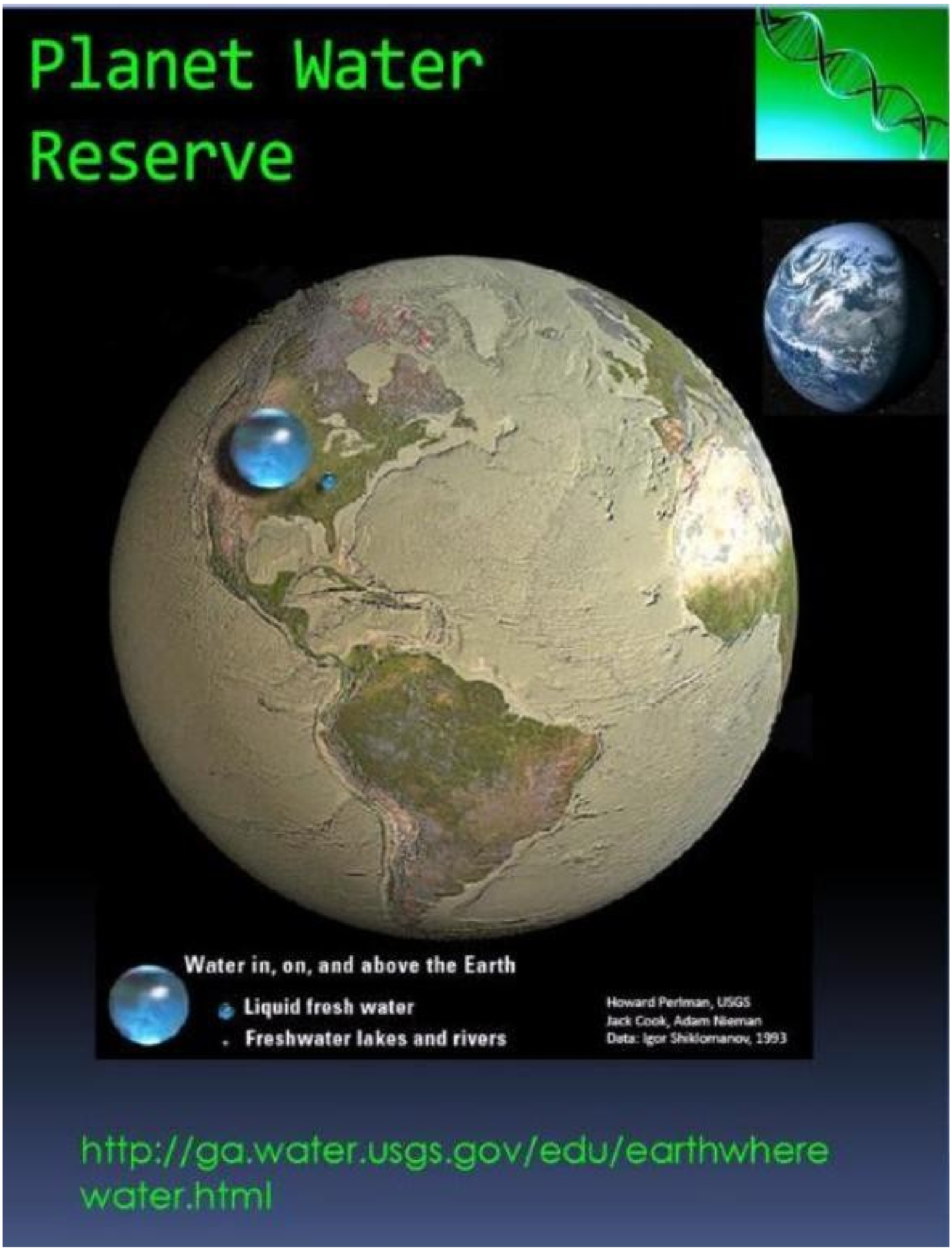

Approximate Plan
Storage Area
New Generation
Gas Station
Vegetables, me-ats, ground me-ats
Distilled Water
Commodity Chemi-cals, Laundry deter-gent, others
Diesel fuel
Gasoline
Doors
Infatable side panton for supprort of Solar Panels
Solar Panel above Boat
Sea Water Distgillation Boat
Equator area 11.000 mi long offers free Solar Energy at 1.330 Wt/m2 of Solar Panels
Shipping is v i a Solar Panel powered boats
Infatable side panton for supprort of Solar Panels
GROUND
Distilled Water Storage

Fig. 8. New type of the Carbon Negative fuels gas station offered herein.

The new gas stations (Fig. 8) selling the Carbon Negative mixture as we noted above: 40% of fuel Isobutanol, 30% fuel 1,1-dubutanoxybatane, 10% Mesityl oxide [24,34,35] and 20% fuel DAA [15-17, 29] along with the genetically engineered foods and normal foods for the home cooking of the customers showed pretty much promising tendencies of the improved sales of both the Carbon Negative fuels and the foods for the home cooking and consumption. Additionally said gas stations sell to the customers the chemicals widely used by the household - and this all just to save the valuable time for the valuable customers. Apparently customers really appreciate the opportunity to save their time while visiting said new version of the gas stations selling also foods for the households. Saving of the customers time was our primary priority and the new route to improve sales of the Carbon Negative fuels. Basically we have reached our goal; the new kind of the gas stations probably will replace the existing gas station selling only snacks and Gasoline and Diesel fuel manufactured from petroleum nad killing Earth by the waste of fresh water to the Outer Space.

Actually, said above the new type of the gas stations along with the offered there Carbon Negative fuels is the delicate and intelligent response of the Author to his attempted murder committed by SHELL in response to the Author’s offer to SHELL go start the manufacture of the Carbon Negative fuels.

We are very much concerned about the amount of the fresh water reserves on Earth. Fig. 9 shows the Governmental data on that [33]. Fig. 10 elaborates these data.



Planet Water Reserve

Water in, on, and above the Earth
Liquid fresh water
Freshwater lakes and rivers
Howard Perlman, USGS
Jack Cook, Adam Nieman
Data: Igor Shiklomanov, 1993

http://ga.water.usgs.gov/edu/earthwherewater.html

Fig. 9. Fresh water reserves of Earth [33].

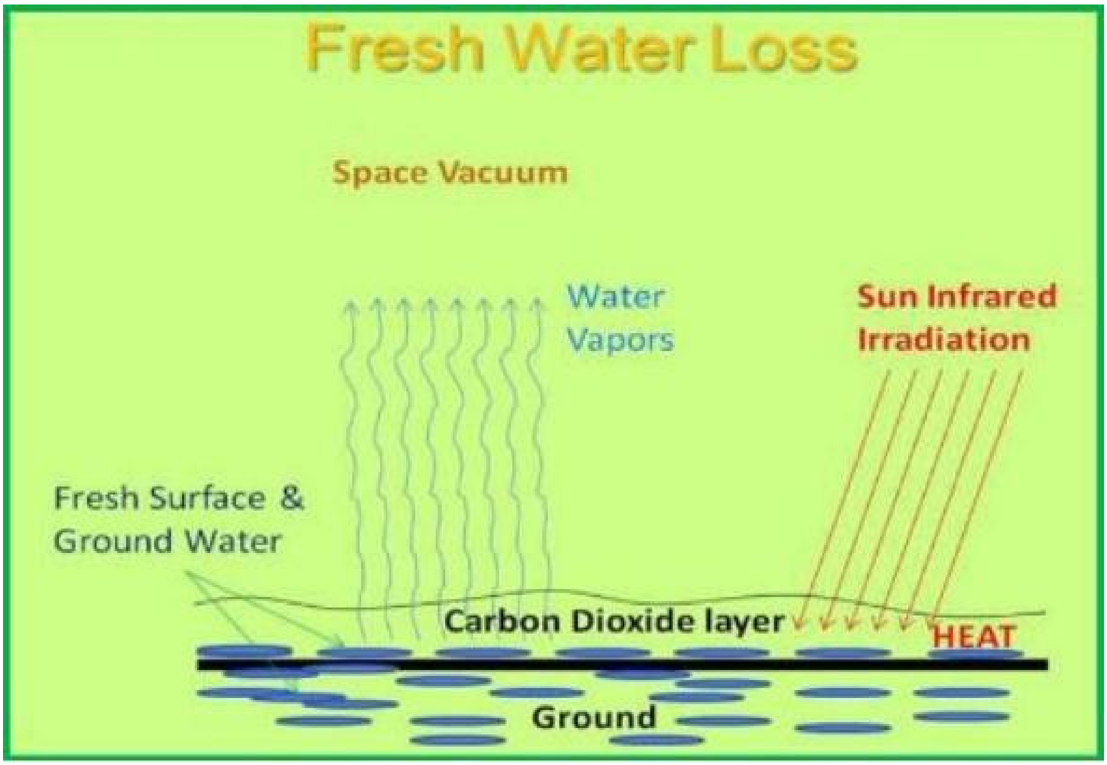


Fig. 10. Loss of fresh water from Earth to the Space vacuum due to the elevated air CO_2 concentrations [6,21].

The Author came to Houston in January of 1998 (the time for the weather change is only 25 years) . He was pleased by the Houston warm weather and always blue bottomless sky. Just in passed from that time years the Houston weather has changed. There is rain almost every day now. Rain is good as more fresh water comes to the Ground. However we need to realize that the Earth atmosphere which is only 400 miles thick above the Ground and ends up with the Outer Space vacuum sucking the fresh water vapors from Earth's atmosphere if the air CO_2 exceeds certain levels. Said atmosphere structure is not even. Important is the closeness to Houston of the Mexican Gulf. Air CO_2 spreads over the ground and the sea water. Sea does not boil but what the processes are at the thing layer of the air CO_2 and the neighboring sea water the Author is not sure. It might be evaporating so much that now the Houston wheather has dramatically changed. The days are cloudy, and the clouds come from the evaporated by the Mexican Gulf sea water. There is the shortage of fresh water coming to Earth. Shortage of the fresh water means shortage of livestock and crops production - there will be nothing to eat in 10-25 years from now. This is the projection offered by the Author in this article. Rains are at the atmosphere’s bottom. Above that there are different events and above that is the Space vacuum. Therefore, the rainy now weather in Houston reflects the substantially increased amount of the fresh water vapors in the air gas blend blend. Specifically, with the changes in Houston weather you can easily see that over accumulated air CO_2 boils sea water in the Mexican Gulf. Most part of Mexican Gulf is in the Equator area where the Sun gives for free to us up to 1,330 Wt/m^2 of the solar panels. The same happens with the air CO_2 which selectively absorbs the solar light infra red energy and converts it to heat. That heat boils sea water on the surface of Mexican Gulf changing in Houston weather now. South winds bring evaporated from Mexican Gulf fresh water condensed in the clouds often offering rain these days. Only 25 years from the Author’s arrival to Houston and such a dramatic weather change there. So, you can easily see that the changes to the fresh water evaporation to the Space vacuum are coming as we now project - in the next 10-25 years from now. Fresh water shortage will mean the shortage of the crops and the livestock production. The ecological crisis is coming and it will be the worst in the history of the humankind. The Author plans to prevent that from happening. By the establishing the domination of the Carbon Negative corporations both fuel and genetically engineered foods for feeding the anticipated starving customers.

The planned price for the Gasoline and Diesel fuel replacements is planned at the level of \$2.60-\$2.70 per gallon regardless if the fuel will be used for the Gasoline or Diesel fuel powered cars / trucks. We have not had a chance to investigate the suitability of this new Carbon Negative mixture use for powering of the air jet turbines yet [36]. We are confident it will work even there but we have to check it thoroughly and meticulously there like we did with the Gasoline or Diesel fuel powered cars as noted in this article.

Therefore we are gong to save the Earth’s fresh water escaping to the outer Space. What fresh water shortage mean? No crops and no livestock production. Global starvation is coming to Earth. And we are going to revert it by noted herein in this article means. The Author claims he will save this world and he will save the Earth’s fresh water.

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Chapter 7. New DNA Sequences Encoding Biosynthesis of Cell

Polysaccharides in *Bifidobacterium breve, B. longum and B. bifidum*.

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Abstract

The useful properties of Bifidobacteria do not need to be discussed herein. We have discovered the unique therapeutic properties of surface polysaccharides of certain strains of bifidobacteria helping recovery of multiple patients during the described Cholera outbreak in the Russian Federation. Herein we have presented the nucleotide sequences encoding the biosynthesis of said polysaccharides in Bifidobacterium bifidum, B. breve and B. longum. Selective medium for isolation of bifidobacteria from feces is shown. **Importance**: Therapeutic effect of extracellular bifidobacterial polisaccharides is discussed with the respective images of the recovered gastro-intestinal epithelium.

Key words: bifidobacteria, bifidobacteria-probiotics; surface polysaccharides of B. bifidum, B. breve and B. longum; therapeutic action of said polysaccharides; gastro-intestinal epithelium recovery with said polysaccharides.

Intorduction

The Author has noticed that often his excrements have glossy structure and if dried on solid lives of plants become completely transparent. The Author suggested that his feces were rich in the content of the polysaccharides and attempted the isolation of the most numerous strains of his own intestinal bacteria. Said numerous strains turned out to be Bifidobacterium breve, b. bifidum and B. longum. Essentially, the number of bifidobacterial strains in the feces of the Author was significant, but these three species dominated quantitively. The Author has made a suggestion that said his own bifidobacterial strains are in charge for said polysaccharides production [51].

The Author has examined his feces for the presence of the specific polysaccharides and has identified at least three of said polysaccharides the Author has purified said polysaccharides, applied the high-performance liquid chromatography (HPLC), multi-angle laser light scattering, the use of viscometer, and of the refractive index detector (HPSEC-MALLS-Vis-RID), and then performed the Fourier transformation of the infrared light (FT-IR). The Author has used said methodologies to discriminate his own fecal polysaccharides from nine different species of brown algae (BA1-9) as that has been done before [14,29,31,51]. The Author's results showed that his fecal polysaccrarides were indeed the β-D-glucans possessing the β-1,3-1,4-glucan linkages at least. The molecular weight, radius of gyration, and intrinsic viscosity of said fecal polysaccharides were ranging from 1.718×10^5 Da to 6.630×10^5 Da, had the actual size of the molecules of 30.2 nm to 51.5 nm, and were present in the Author's feces at the amounts of 360.99 mL/g to 865.52 mL/g [14,29,51]. Moreover, α values of said fecal polysaccharides were in the range of 0.635 to 0.971, which indicated a rigid rod their chain conformation, at least [29,31,51].

Said fecal polysaccharides possessed their own antioxidant activities of BSPs exhibited substantial radical scavenging activities against DPPH (1,1-diphenyl-2-picrylhydrazyl) and ABTS (2, 2'-azino-bis-3-ethylbenzothiazoline-6-sulfonic acid) radicals, which indicated that the use of BSPs might be the potential approach for antioxidant supplements [51].

Earlier, the Author had a trip to his native town Saratov when said town had the epidemiological outbreak of Cholera, the intestinal infection of the National importance for the Russian

Federation. Luckily, the Author was allowed to use the Mixture, the artificial preparation containing said polysaccharides in the amounts of 0.5-0.97 g/L of the liquid the infected with Cholera Russians had to consume during their treatment and the recovery period [9]. The specific feature of Cholera infection in people is the complete destruction of the gastro-intestinal epithelium and that significantly increased the recovery periods of time [9]. The specific feature the Author tried to examine on said recovering from Cholera Russian citizens was the stimulation of the gastro-intestinal epithelium recovery with his preparation called “Mixture” to cure said people recovering from this dangerous infection [9]. That has cause the specific interest of the Author to said his intestinal polysaccharides to be commercially included into the Mixtures for the treatment of serious gastro-intestinal disorders in various people after the proper testing and the positive decision of the US controlling entities to use said polysaccrarides [9]. Basically, said polysaccharides are the product of the Author’s own intestinal bifidobactera, the microorganisms widely used as the probiotics [12, 13].

The Author is the source of said bifidobacterial strains producing said polysaccharides *in vivo* and certain time during the *in vitro* cultivation (not to exceed 200 h). The linkage of said polysaccharides to the chromosomal DNA of said strains of intestinal bifidobacteria was estimated during the genome tailoring experiments the Author has conducted to associate the presence of said polysaccharides to the chromosomal DNA of said strains of bifidobacteria. The experiments were conducted as described before [1-7]. The Author has eliminated the DNA sequences possibly associated with the encoding of said polysaccharides and resulting was the lack of said polysaccraides production by said strains of B. bifidum, B. breve and B. longum. Returning back the said DNA sequences restored the polysaccharides production which is not included into this original article due to the limitations of the published volume.

Materials and Methods

The isolation of the genomic DNA from said strains of bifidobacterial B. bifidum, B. breve and B. longum was done as described before with no modifications [13,51].

Sequencing of the isolated genomic DNA from said strains of bifidobacterial was conducted by the methods and procedures used for ther customer DNA sequencing by the business Illumina in San-Diego, CA [14,51].

We offer herein the actual DNA sequences encoding said polysaccharides.

Sequence 1. Bifidobacterium bifidum polysaccharide DNA sequence. The NCBI deposition number is 2665132.

1 ccaaattacg ggcggttaat agatgatcaa tgtccaagaa gcgctggcaa aaccttggtt

61 acctatcaga tattttctat atccagattc aactggtcca aattcgcaag gagaatagct

121 ggctggttcg gaattgcttg agctgacttt atacggctga tttggtcttt gcttatatac

181 gtccggatgg cgaccgtcgc ttcctagttg tggctaactt gtccaatgaa gagcaagact

241 tgacagtaga aggaaaagtc tgattgaaaa aaatctgtct cactgcggct aaagaagtac

301 ttgaaggaca ggtcttggct ccatgggatg ctttctgtgt ggaattacta tttatatttt

361 atttaaaatt ttgcagaaaa gaaatcatgt aaaaacaagg gaggactgta taaaagacag

421 aaatcctttg ttttttataa ccaaggttta taaactttca ttctcgaaat tcaattaact

481 ccactattaa ggagaaagaa gatgaacata aagaagcgtg tccttagtgc ttacaaattc

541 aggtctgact tttgcatctg ctttgcttta gctgcttgcg gccaatcagg ttcagataca

601 aaaacttact catcaacctt tagtggaaat ccaactacat ttaactatct attagactat

661 tacgctgata atacagtcaa ttgaaataag agcaggataa gggggcctcg taaaaggtat

721 tgcggcttgg taatacctt tacgaggctt tttgatatga gcccatgttt tctcggtagg

781 ggtgagtagg attgtactca gaggaagagg taaaagttta tgcccaaact cttcgcataa

841 ttccccattc tatggaatct tgcattatcc ataataataa aagttctagc ccgatggtgt

901 ggttaatgtt ggtaagaaaa acttctgaaa ccttgcttca aaaaagtcgc tcgtcatcgt

961 ttcttcgtgg gtcattggag cgattaactc accatttgtt agacctgcaa ccaaagaaat

1021 cctctgtttt cttcttccag atactttgcc tcttcttaac tgacctttta atgagcgacc

1081 atattctcga taatttttaag tatcgaatcc tgtttcatca atctaaacag gtgataggtg

1141 ctttggggcta ttaaaattct taagaaataa ggctactttt tctgggtctt gttcataatt

1201 agattgccccc tagaatagta cacttctgct tctaaaacat tgttagaaat cgatttgact

1261 atttgtcatg gtcctgatcg ttcttatttc attttactat atttttgttt cgcgggaagt

1321 ctactaagat acttaaagat gcagatagta ggggaaatgt agacattacc gtaaaaaagt

1381 gatataattg tacgatgttc aaggtatagg tgttaatcat gagtagacgt tttagggaat

1441 cacgttcaca gaaagtgaag cgaagtgtta atatcgtttt gctgactatt tattttttgt

1501 tagtttgttt tttattgttc ttggtcttta agtacaatat ccttgctttt agatatctta

1561 acctagtggt aactgcgtta gtcctactag ttgccttggt agggctactc ttgattatct

1621 ataagggagc tgaaaagttt actatttttc tgttggtgtt ctctatcctt gtcagctctg

1681 tgcagtacag cagtttgttg gactgaccaa tcgtttaaat gcgacttcta tgtcgctctt

1741 atattcaatc attactcaga agtgtcgctg ttttagcaga tagtgatatc gaaaatgtta

1801 cgcaactgac gagtgtgaca gcaccgactg ggactgataa tgaaaatatt caaaaactac

1861 tagctgatat taagtcaagt cagaataccg atttgacggt cgaccagagt tcgtcttact

1921 tggcagctta caagagtttg attgcattgg agactaaggc cattgtctta aatagtgtct

1981 ttgccaatat catcgagtca gagtatccag actacgcatc gaagataaaa aagatttata

2041 ccaagggatt cactaattaa gtagaagctc ctaagacgtc taagaatcag tctttcaata

2101 tctatgttag tggaattgac acctatggtc ctattagttc ggtgtcgcga tcagatgtca

2161 atatcctgat gactgtcaat cgagatacca agaaaatcct cttgattaca acgccacgtg

2221 atgcctatgt accaatagca gatggtggaa ataatcaaaa agataaatta acccatgcgg

2281 gcatttatgg tccattcaca ccttagaaaa tctctatgga gtggatatca agttgattcg

2341 attactatgt gcgattgaac ttgggagggg ttcacttctt tcttgaaaat gattgactta

2401 tagatgttca taatgatcaa gagttttcag ctctacatgg gaagttccat ttcccagtag

2461 ggaatgtcct tctagactct gagcaggctc taggttttgt acgtgaacgc tactcactag

2521 ccgatggaga ccgtgaccgt ggtcgcaacc aacgggaggt gattgtggct atccttcaaa

2581 aattttcgtc aaccgaagca ctgaaaaatt atagtactat cattgatagc ttgcaagatt

2641 ctatccttac aaatatgcca cttgagacta tgataaattt ggtcaatact cagttagaaa

2701 gtggagggaa ttatagggta aattctcaag atttaaaagg tacaggtcgg acggatcttc

2761 cttcttatgc aatgccagac agtaacctct atgtgatgga aatagatgat agtagtttag

2821 ctgtagttaa caggatgtga tggagggtag agcagctata atgaaatgat agacatccat

2881 tcgcatatcg tttttgatgt agatgacggt cccaagtcaa gagaggggag caaggctctc

2941 ttgatagttt cctacaggca gggggtgcga accattgtct ctacctctca ccgtcgcaag

3001 ggcatgtttg aggctccgga agagaagata gcagattact ttcttcaggt tcgggaaatt

3061 gcaaaagaag tagcagatga tttagtcatt gcttatggcg cagagatata ctatactctg

3121 gatgctctag ggaagctaga aaaaaaagaa attcctaccc ttaatgatag tcgttatgcc

3181 ttgattgagt ttagcatgca tacttcctat cgtcagattc atacgggatt gagcaatatt

3241 gaatcacgcc agtaattgct catattgaac gttatgatgc tttagagaat ttgatgttgg

3301 aacgaaaaac atgttcgtga actgattgat atggggtgct atactcagat ttatagttat

3361 catgtttcaa aacctttgtt ctttggtgaa aaatataaat tcatgaaaaa gagagctcgg

3421 tattttgggg aacgtgattt agttcatgta gttgcaagtg acatgcacaa tttagacagt

3481 atatgcaaca ggcatatgat atcattgcta agaaatattg gagccaaaaa agacctccat

3541 agcgttagaa cttttgtaga taatcccaga ttaattataa tggatcaatt aatttaggag

3601 accctatgaa ggaacaaaac actttggaaa tcgatgtatt gcaactatcc agagctttat

3661 ggaccagaaa gttagtcatt ttattagtgg caattataac ttcttcagtt gcttttgcct

3721 acagtacttt tgttatcaaa cctgagttta ctagtacgac tcggatttat gtagttaacc

3781 gtgatcaggg agagttgtct ggtttaacca atcaagactt gcaggcagga tcatacttgg

3841 ttaaagacta tcgtgaaatt atcctatcgc agtatgtttt ggaggaagtt gtttctgatt

3901 tgggactaga tttgacgcca aaaggtttgg ctaataaaat taaagtaaca gtaccagttg

3961 atacccgttt tgtctctgtt tcagttaatg atcgagttcc tgaagaggca agccgtatcg

4021 ctaactcttt gagagaagta gctgctcaaa aaattatcag tattactcgt gtttctgatg

4081 tgacaacact ggaggtggca agaccggcga tatcaccgtc ttcgccaaat attaaacgca

4141 atacactggt tggtttttttg gcaggggtga gtggaactag tgttatagtt tttcttcttg

4201 aatttttgaa cactcgtgtg aaacgtccgg aagatatcga aaatacactg cagatgacac

4261 ttttgggagt tgtaccttac ttgagtaagt tgaaatagga gagaggaatg ccgacattag

4321 aaaaaaactg gagttcatta aaatagcaca agaaggcaga agaatattac aatgccttgt

4381 gtacttatat acagttgagc ggagataaac taaaagtaat ttccgttact tctgttaacc

4441 ctggggaagg aaaaacaact acttccgtaa atatagcaag gtcgtttgcg cgtgcaggct

4501 ataaaactct tttgatcgat ggcgatactc gaaattcagt tatatcagga gtttttaaat

4561 cgcgtgaagg aattacaggg ctaacagaat ttttatctgg gacagctgat ttatcttacg

4621 gtttatgtga tacaaatatt gttaatttat ttgtagttca atcgggacct gtatcaccaa

4681 accctacagc cttgttacaa agtaggaatt ttaatgatat gattgaaaca ttgcgtaaat

4741 attttgatta tatcattgtt gatacaccac ctgttggaat tgttattgat gcggtaatta

4801 tcactcaaaa gtgtgatgcg tccatcttgg taacagcaac aggtgaggcg aataaacgtg

4861 atgtccaaaa agcgaaacaa caattagaac aaacagggaa actgttccta ggagttgttt

4921 tgggtacatt ggatatctcg gttgataagt atggagttta cgcttcctat ggaaattatg

4981 gtaattaata acttaggaaa gattttatgg ataaaaaagg attggaaatt tttctggcag

5041 tattacagag tattattgtc attttattgg tttattttct tagctttgtt agagagacag

5101 aacttgaacg ttcttcgatg gttatactat accttctcca cttttttgta ttctatttta

5161 gttcctatgg taacaaattt tttggaagag ggtacctagt tgagtttaat agtactataa

5221 gatatatttt tttctttgca atagctataa gtgtattaaa cttttttata gcggaacggt

5281 ttagtatctc tagaagagga atggtatact tcttaacttt agaaggaata tccttatact

5341 tgttaaattt cttagtaaag aaatattgga agcatgtgtt ttttaatcca ggggatagca

5401 agattatttt actgttaaca gtaacggaaa atatagaaaa agttcttgat aaattgctag

5461 aatctgatga actttcatgg aaactggtag cagtaagtgt tttggataaa tctgattttc

5521 aacatgataa aatacctgta attgaaaagg aggaaattat tgaatttgca acgcatgaag

5581 ttgtggatga ggtgtttgtc gatcttccag gagagagcta tgatattgga gaaattatct

5641 ctaagtttga gacaatgttg atagatgtaa ctgtaaatct taatgcattt aataagaatt

5701 tgggtcgtaa tattcaaatt catgagatag taggattgaa tgtagtcact ttctctacaa

5761 aactagtcat atttttataa gtgatttcaa agagaattct cgatatttgt ggtgccacta

5821 tctttttgct atagctagtc tagttttagt tccattgatt cgtaaagatg ttggccttat

5881 gcggaccagc tatttttgct caaactcgta tagggaccaa tggtcgacat tttacctttt

5941 ataccttccg ttcgatgcgg atcgatgctg aagttatcaa agaacagttg atggatcaaa

6001 atacgatgcg aggtggtatg tttaagatgg acaatgatcc tcgtgttaca aaaattggtc

6061 taaaaccagt ttagatgagt taccccagtt ttggaatgtc tttataggag gctttattcg

6121 atatgagttt ggtgggaaca cgtccaccta cagtagacga gtatgatcag tatactccag

6181 aacagttacg tcgactcagc tttaaacctg gtattacagg tttatggcag gttagcggcc

6241 gtagtaaaat aaccgattcc gacgatgttg taaaattaga tgtggcttat attgataatt

6301 ggacaatctg gaaagatatt gaggttttgc ttaaaactgt taaagttgta tttatgagga

6361 atggagcgaa gtaagggatg aaagtatgtc tagttggatc tagtggaggt catttaactc

6421 atttgtattt attattacct ttctggaaag atagagaaag attttgggtg acttttgata

6481 aagaagatgc aagaagtatt ttagaaaatg aaatatttta tccatgttat tatcctacta

6541 atcgtaatct atttaatctt attaaaaata cgattcttgc tttcaaaatt ttgagaaagg

6601 tattatcgtc tcatcagggg cagctgtagc agttcctttc ttttatctag aacgccctga

6661 ggagggtatt tggtgctaag acagtctata tagaagtatt tgatagaatt gatgctccga

6721 caatgactgg gaaacttgtt tatccagtaa ctgacaggtt tattgtacaa tgggaagaaa

6781 tgacccaagt atatccgaaa gcaatcaatc tcggagggat tttctaatga tttttgtgac

6841 agtaggttct catgaacaac agtttaatcg acttatttta gaggttgata gattaaaagg

6901 tgagggattt attcaggatg atgtttttat tcccacagga tactctaatt atgttccaaa

6961 attttgtaaa tgggaggaat taatatctta tgaaaaaatg aatcaattga ttaaggaatc

7021 agatattttc attacccatg gcggtccagc tacgtttatg gcagttattg ctagaggtaa

7081tttttccaata attgttccgc ggctaaaaaa atttggtgag catgtaaatg atcaccagat

7141 gcaatttgta aaaataacga aagaaatata caatttaata gttatagatg atatttcaga

7201 cttacattta attcttcata attttaagga caaacatttt gaaacttatt tgaataacga

7261 gagatttttt gtacgtttca atgtggaaat cagtaacctt tttaaaggaa ataaaataaa

7321 tgaggattag aatagaacct cagtattttc tttataaata cctttggttt attatcctac

7381 ttccattaca gtttatgcaa ttaatattat tctttttaat tgctttaact cttttaccaa

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The file desposited to the NCBI is attached to this publication.

Sequence 2. Bifidobacterium breve MT 0033356 polysaccharide DNA sequence. The NCBI deposition number is ID 697837.

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The file desposited to the NCBI is attached to this publication.

Sequence 3. Bifidobacterium longum MTG 404487 surface polysaccharide. The NCBI deposition number is 404487.

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15905 aactgcgtta acctagtggt gtcctactag ttgccttggt agggctactc ttgattatct

15965 tgaaaagttt tgttggtgtt actatttttc ctctatcctt gtcagctctg ataaaaaagc

16125 gactgaccaa cagtttgttg tcgtttaaat gcgacttcta tgtcgctctt tgcagtacag

16185 agtgtcgctg attactcaga atattcaatc ttttagcaga tagtgatatc gaaaatgtta

16245 tgaaaatatt ggactgataa caaaaactac cgcaactgac gagtgtgaca gcaccgactg

16305 cgaccagag taagtcaagt ttagctgatat cagaataccg atttgacggt tcgtcttact

16365 tggcagctta aatagtgtct caagagtttg attgcagggg agactaaggc cattgtctta

16425 gaagataaaa actacgcatc aagatttata ttgaaaatat catcgagtca gagtatccag

16485 taagaatcag gtagaagctc ctaagacgtc tctttcaatac caagggatt cactaaaaaa

16545 ctattagttc ggtgtcgcga tctatgttag tcagatgtca tggaattgac acctatggtc

16605 ctatatcctgat cgagatacca agaaaatc gactgtcaat cttgaccaca acgccacgtg

16665 accaatagca ataatcaaaa agataaatt aatgcctatgt gatggtggaa acccatgcgg

16725 tccattcaca gcatttatgg agttgattcg ccttagaaaa gtggatatca tctctatgga

16785 attactatgt gattgactta gcgattgaac ttcacttctt ttgggagggg tcttgaaaat

16845 tagatgttca ttcccagtag ctctacatgg taatgatcaa gaagttccat gagttttcag

16905 ggaatgtcca taggttttgt gagcaggctc acgtgaacgc tactcactag tctagactct

16965 ggtcgcaacc ccgtgaccgt aacaaaaggt gattgtggct atccttcaaa ccgatggaga

17005 ccttaacgtc ctgattaatt atagtactat aaccgaagca cattgatagc ttgcaagatt

17065 tttttatgcca cttgagacta tgataaattt ggtcaatact cagttagaaa ctatccaaac

17068 ctgatgcgat

The sequence ID per the deposited to the NCBI file is 404487. The FASTA file with this sequence is attached to this file with the original publication.

Results.

As we have promised in [10], these are the exact DNA sequences determined to be produced *in vivo* by the Author’s intestinal bifidobacterial. Said polysaccarides have been tested to increase substantially the recovery times in the Russian citizens recently [10]. Now this is the task of our other Senior executive team member to run the investigation or to join the investigation of said therapeutic preparation for the treatment of the serious gastro-intestinal infections in the established clinical trials. Said feature is beyond of our expertise of the Author. But he trusts that such testing is essential to implement the therapeutic preparation “Mixture” he has used successfully to substantially shorten the recovery times for the patients infected with the Cholera infection in the Russian Federation recently [10]. Basically, the recovery time has been shortened to 8-9 days vs. 21-56 days if no therapeutic preparation “mixture” has been used [10]. As the Author has planned and reasonably anticipated, the overall result of testing of the proprietary therapeutic “Mixture” showed exceptionally positive results of said proprietary mixture application in all infected with Cholera adults and in all infected children [10]. The infection, which has been confirmed to be the Cholera infection by the State Epidemiologists and Microbiologists who immediately attended the clinics of the Saratov State Medical University during said epidemiological outbreak, noted in the recently published article [10].

The results of the treatment with Ampicillin and the application of the proprietary therapeutic preparation Mixture showed very fast and definite recovery of all infected patients. The treated disease (we were not informed about cases of untreated infection in said geographical area) stopped on the eight day in all infected patients. On the ninth day, we were allowed to get certain images of the patient’s intestinal status from the specialists of Saratov State Medical University [10].

Therefore, the Author feels good per this his expansion to the therapeutic area besides the major business directions he already has taken in the manufacture of the carbon negative fuels and the manufacture of the distilled water from the sea water.

Discussion.

As our corporate web site stated there will be the shortage of the fresh water anticipated in the next 10-25 years [16]. The Author is not the medium to predict the timing of that exactly, there might be certain timing deviation in both sides: to make the waiting time shorter or wise versa - LONGER.

The Earth fresh water reserves of Earth are indicated in the picture below (Fig.1). The evaporated fresh water is not shown in the picture below, but the destiny of that fresh water vapors is very disturbing since in 2010 NASA has called the air CO_2 levels of 400 ppm as “the point of NO return” [16]

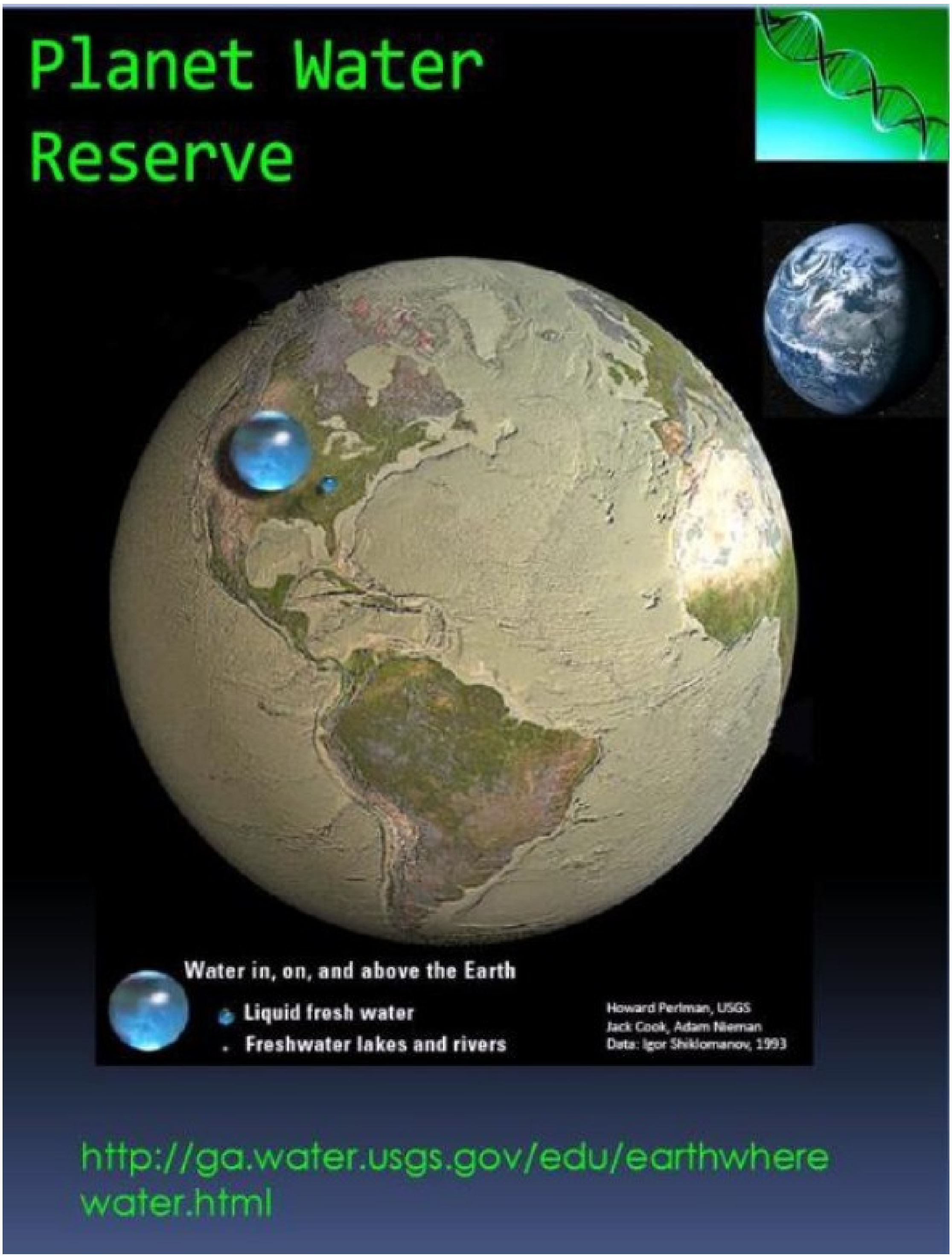

Planet Water Reserve
Water in, on, and above the Earth
Liquid fresh water
Freshwater lakes and rivers
Howard Perlman, USGS
Jack Cook, Adam Nieman
Data: Igor Shiklomanov, 1993
http://ga.water.usgs.gov/edu/earthwherewater.html

Fig. 1. Earth fresh water reserves as indicated at http://ga.water.usds.gov./edu/earthwherewater.html [1,3,16].

The shown below picture (Fig. 2) provides the details of our ecological concerns with the availability of the fresh water in the future for the livestock manufacture and the crop manufacture, predicting certain time of Global food starvation on Earth as that was described in detail at [16].

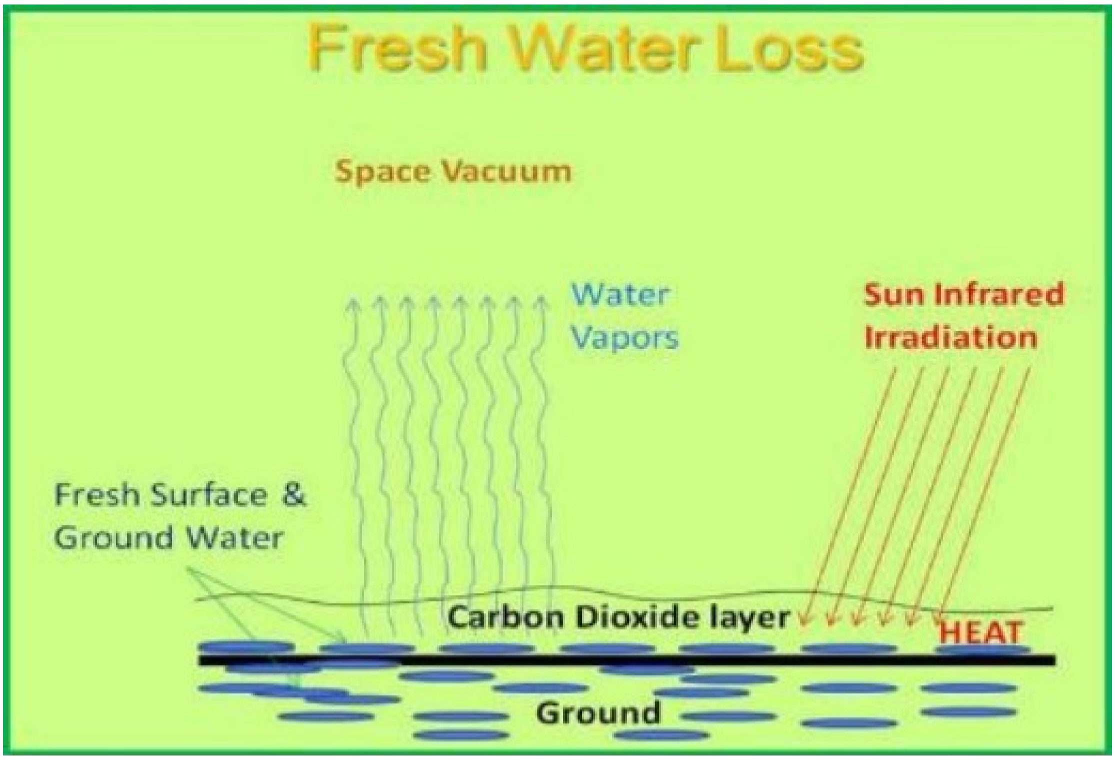


Fig. 2. The mechanism of the fresh water vapors loss to the Space vacuum [16].

Basically as the Author detailed at [16] the air CO_2 at the levels above 400 ppm significantly changes the amount of the fresh water on our planet. As that has been known before that the CO_2 selectively absorbs Solar infra red energy, which at the point of absorption is converted into the heat energy. The air CO_2 as the heaviest gas in the air blend ($1m^3$ of CO_2 is 1.997 g at the average air gases mix density of 1.2 g/m^3) forms the layer just above the ground known as the fresh water refuge. Therefore the trapped in the Ground water gets evaporated there and adds to the air fresh water vapors. That added amount is these days very high as we might notice the change of the climate everywhere with the prevalence of cloudy and rainy days and unusually high probability of tornadoes and other weather anomalies.

A fresh water evaporation happens easily in the Equator sea areas and therefore might not be anyhow controlled. For instance Mexican Gulf has been the place for the fresh water evaporation always but recently the fresh water evaporation happens more intensively. These days almost never rainy weather in Houston in 1998 is always rainy. What is that? Yes, indeed, the climate change makes changes of the weather, but so abundantly as in Houston? Might be our predictions of the fresh water shortage on Earth will take much shorter time compared to our recent predictions? We do not know the exact thermal conditions on the surface of the Mexican Gulf, specifically does the surface sea water boil and at what temperature or not, but we could see the evaporated water in Houston TEXAS by the increased number of the rainy days especially this year while keeping in mind that the Author came to Houston for his work in 1998 when almost all the days of the year were with the blue TEXAS sky and with no any precipitation. Twenty years was long enough to accumulate so much air CO_2 that it causes fresh water evaporation that much from the Mexican Gulf salty sea water and going into the air one side of which is the outer Space vacuum.

The consequence of the fresh water vapors loss to the outer Space is known as the shortage of livestock and crops. Here we are on that immediately: we are ready to supply the Humankind with the genetically engineered food for the time of the Global starvation anticipated in the next 10-25 years The starvation time is anticipated as about 70 years from the beginning of that [1]. And the Author promises to make the carbon negative food available for everyone as it is written in this article.Therefore the Author is essential for our planet Earth viability and will ask the investors money to fill the anticipated gap in the supply of the crops and livestock with the carbon negative food supply [16]. The Humankind savior role of the investors is obvious. There has to be the smart guy who might wisely invest the investors moneys to reach the goal of the Humankind savior. Here it is - the Author, who was born form the originally virgin mother and does not look like his father by law - the new "Jesus Christ" who came to save the Earth from what people has been done to the nature starting from the intensive petroleum conversion and burning of the resulting from petroleum fuels.

The progress in the R & D which the Author has reached with the Acetogens-biocatalysts is because the Author was able to use his uniquer electrotransformation / electrofusion generator copy built in 1995 as described before [6]. The history of this generator copy appearing in the US is below. This story is the direct evidence of the Author's active enterpreneurial spirit waking him up daily.

After getting the Russian Patent 2-005776 [6] the Author started looking for the potential consumers for his electrotransformation technology. In 1995 he got the communication with the BTX, Inc. / Genetronics, Inc. per said electrotransformation Generator. The BTX, Inc. / Genetronics, Inc. was very interested in getting a copy and ordered one. The intent of said company was to try this Generator for the therapy of the Head and Neck Cancers with the toxic anti tumor antibiotics and other anti-tumor preparations supposedly easily entering the tumor cells after treatment of said tumor cells *in vivo* with series of similar to electrotransformation high voltage pulses (cell electrototransformation with anti-tumor drugs). So, that company has ordered the copy of said Generator. There was a certain delay in the communication related to the total pricing. The Author has made friends with the Third Secretary of the US Embassy at that time in Moscow, the Russian Federation, Mr. James Winkelman, and promptly characterized to him his problem. Mr. Winkelman was very kind and offered help to the Author and the Author got the funds from the company essential for the UPS transportation of the copy of said Generator (100 lbs) from Moscow, the Russian Federation, to San-Diego, CA. In 1999 the Author has requested the CEO of BTX. Inc. / Genetronics, Inc. if the Author might purchase said copy of his Generator for the spare parts. In response he has received the fax from Ms. Joany Kerr, the International Sales Director, that now the Generator becomes the property of the Author (present of the company). Therefore, the Author was able to do his Acetogens strains biocatalysts development using his electrotransformation Generator [6]. The original generator sold to the BTX, Inc. / Genetronics, Inc. in 1995 is shown in Fig. 3 showing the Moscow, the Russian Federation, the apartment Dr. MV Tyurin had in 1995.

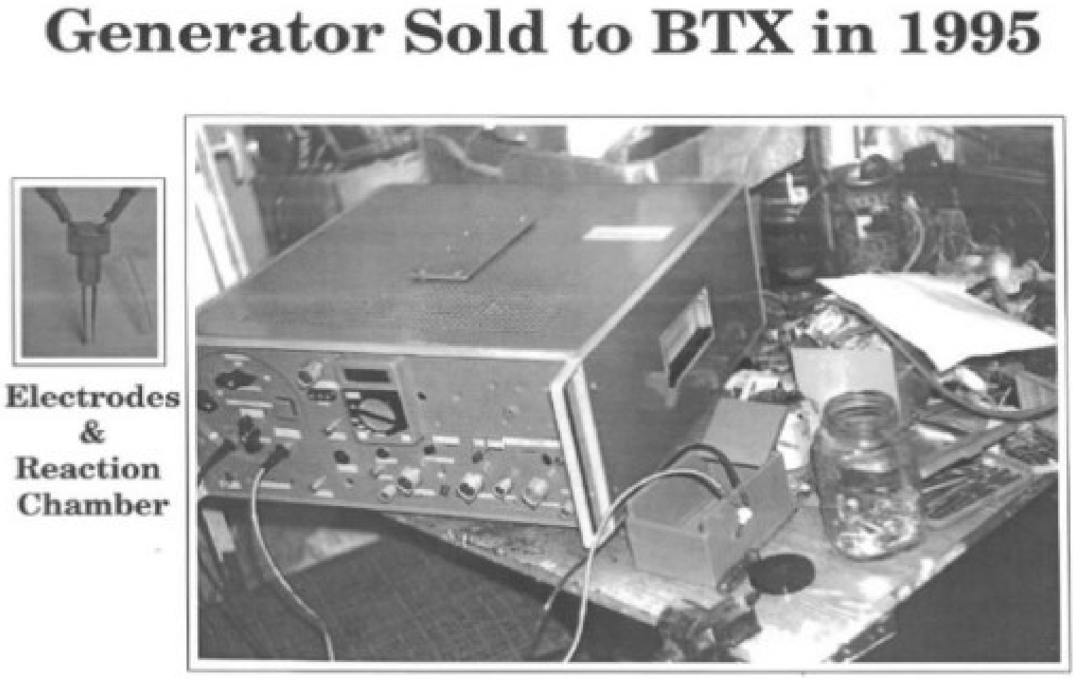
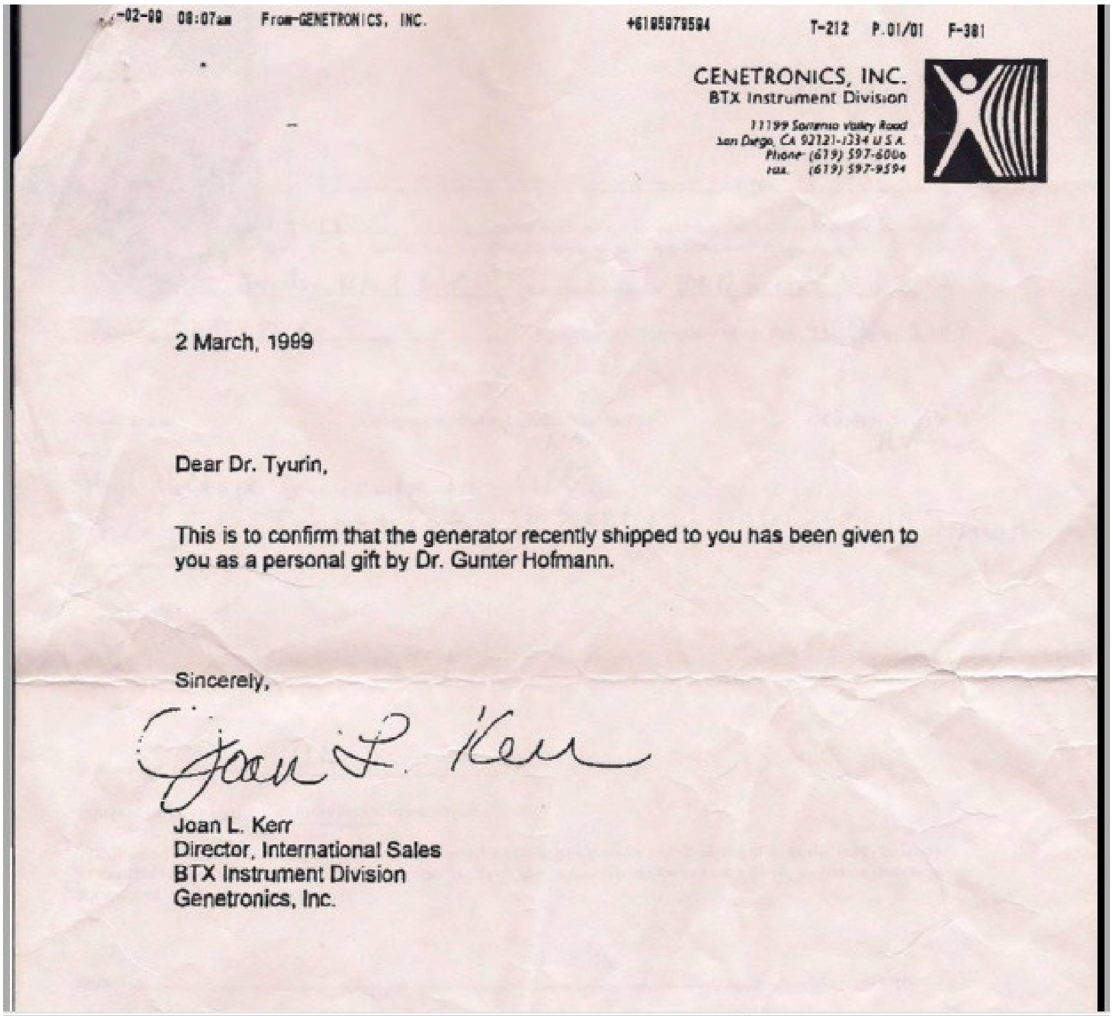


Fig.3. Generator [6] copy sold to BTX, Inc./ Genetronics, Inc. in 1995.

Spending a year at Rice University, Dr. Tyurin started missing his electrotarnsformation adventures he had in Moscow, the Russian Federation. He sent a letter to BTX, Inc. / Genetronics, Inc. CEO, Executive Chairman, President Dr. Gunter A. Hoffman, asking if said purchased in 1995 from Moscow, the Russian Federation, Generator could be sold back to Dr. MV Tyurin as the source of spare parts. In response Dr. MV Tyurin got the fax from Ms. Joan (Joany for the friends) Kerr, the BTX, Inc. / Genetronics, Inc. International Sales Director, as shown in Fig. 4.



-02-99 08:07am From-GENETRONICS, INC. +6195979594 T-212 P.01/01 F-381

GENETRONICS, INC.
BTX Instrument Division

11199 Sorrento Valley Road
San Diego, CA 92121-1334 U.S.A.
Phone (619) 597-6006
Fax (619) 597-9594

2 March, 1999

Dear Dr. Tyurin,

This is to confirm that the generator recently shipped to you has been given to you as a personal gift by Dr. Gunter Hofmann.

Sincerely,

Joan L. Kerr

Joan L. Kerr
Director, International Sales
BTX Instrument Division
Genetronics, Inc.

Fig. 4. Dr MV Tyurin has gotten his access to his electrotransformation / electrofusion Generator [6,11].

The essential need for said Generator was determined by the Author’s observations, that Acetogen cells posses extremely high internal cell electric capacitance. For example, the standard 50 microliters cell sample of the Acetogen cell suspension had the electric capacitance of about 8 micro Farads vs. standard *E. coli* 50 microliter cell sample having the electric capacitance of 50 nano Farads. The design of the electric circuit of the Author’s electrotransformation Generator allowed the electric treatment of the cell samples with very high internal capacitance, like in the case of Acetogens [1,2,11,16]. Fig. 7 shows the distortion of the shape of the high voltage exponential or square pulses, created by the widely used in the laboratories world-wide Bio-Rad, Inc. or BTX, Inc. electroporation generators.

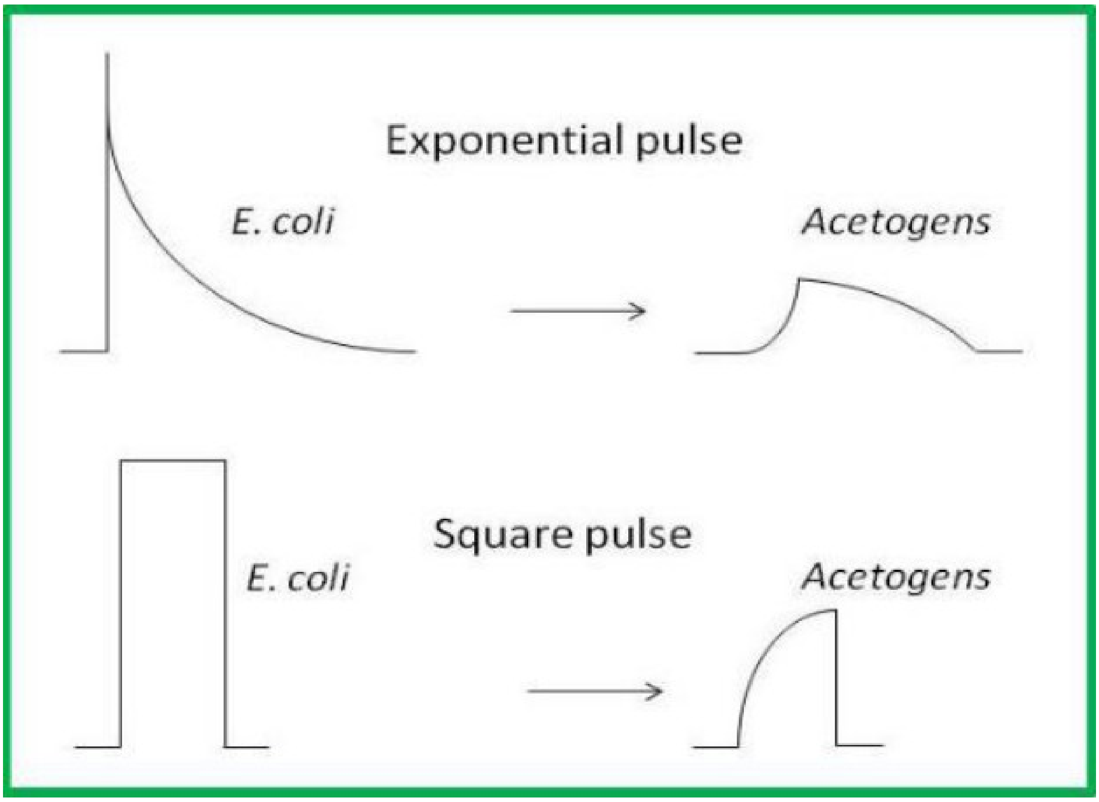


Fig. 5. Distortion of the original square of exponential high-voltatge electric pulse in the widely used electroporation generators made by Bio-Rad, Inc. or BTX, Inc.

Fig. 6 shows the basics of the electronics design of the output cascades of the Bio-Rad, Inc. or BTX, Inc. widely used in the laboratories around the World electroporation generators.

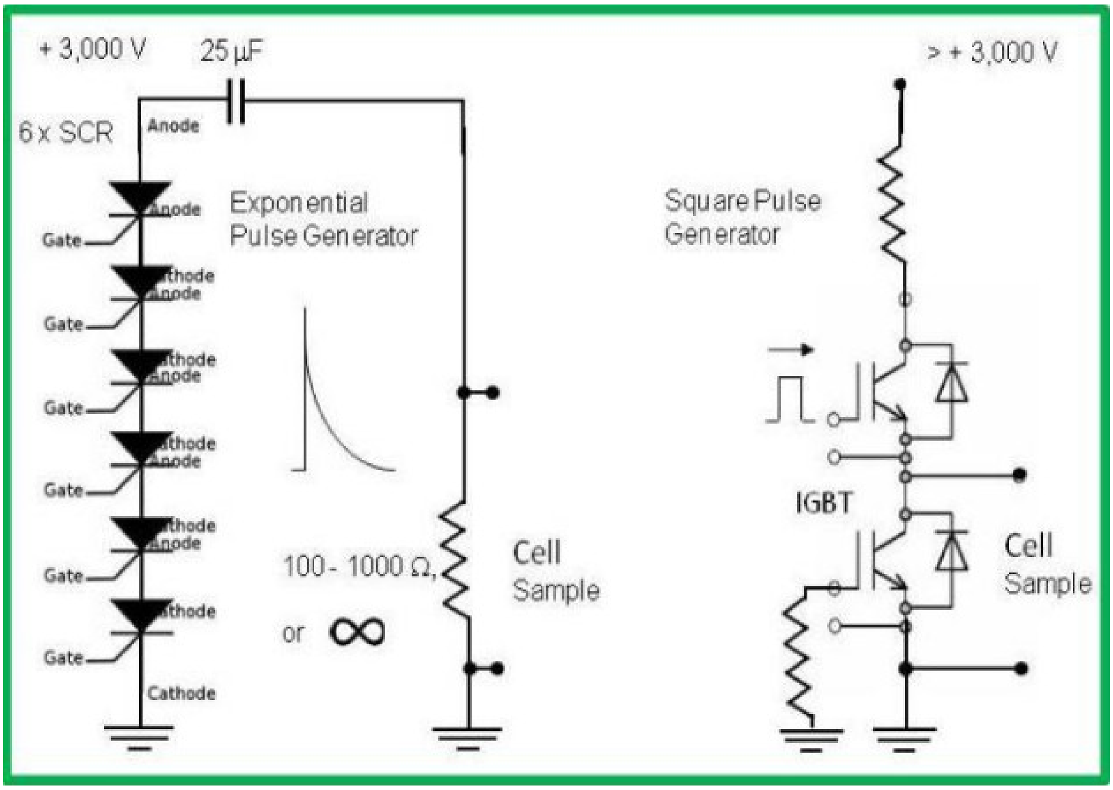


Fig. 6. Electronics details of the power output cascades of the standard laboratory generators for cell electroporation: Square pulse output (BTX, Inc. generator) or exponential decay pulse output (Bio-Rad, Inc. generator).

The Author never had said pulse distortion problems by the high electric capacitance of the target cell samples like Acetogens due to the principally different electronics design of his electrotransformation / electrofusion Generators [6,11,16] as Fig. 7 shows.

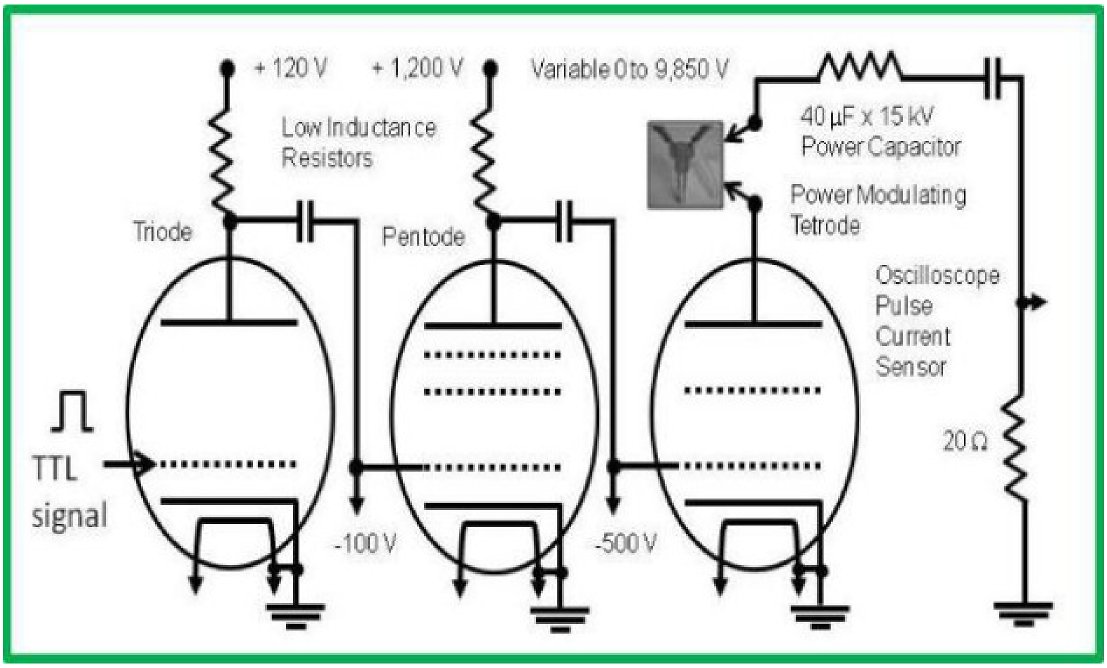


Fig. 7. Electrotransfpormation / electrofusion Generator invented by the Author [6,11].

It is extremely important, that the design of the electronic scheme shown in Fig. 10 allowed the generation of the secondary oscillations [2-7] by the to be electrotransformed cells of Acetogens during the standard high voltage electrotransformation at the high voltage electric pulse generation by said Generator [6,11], as clearly shown in Fig. 8.

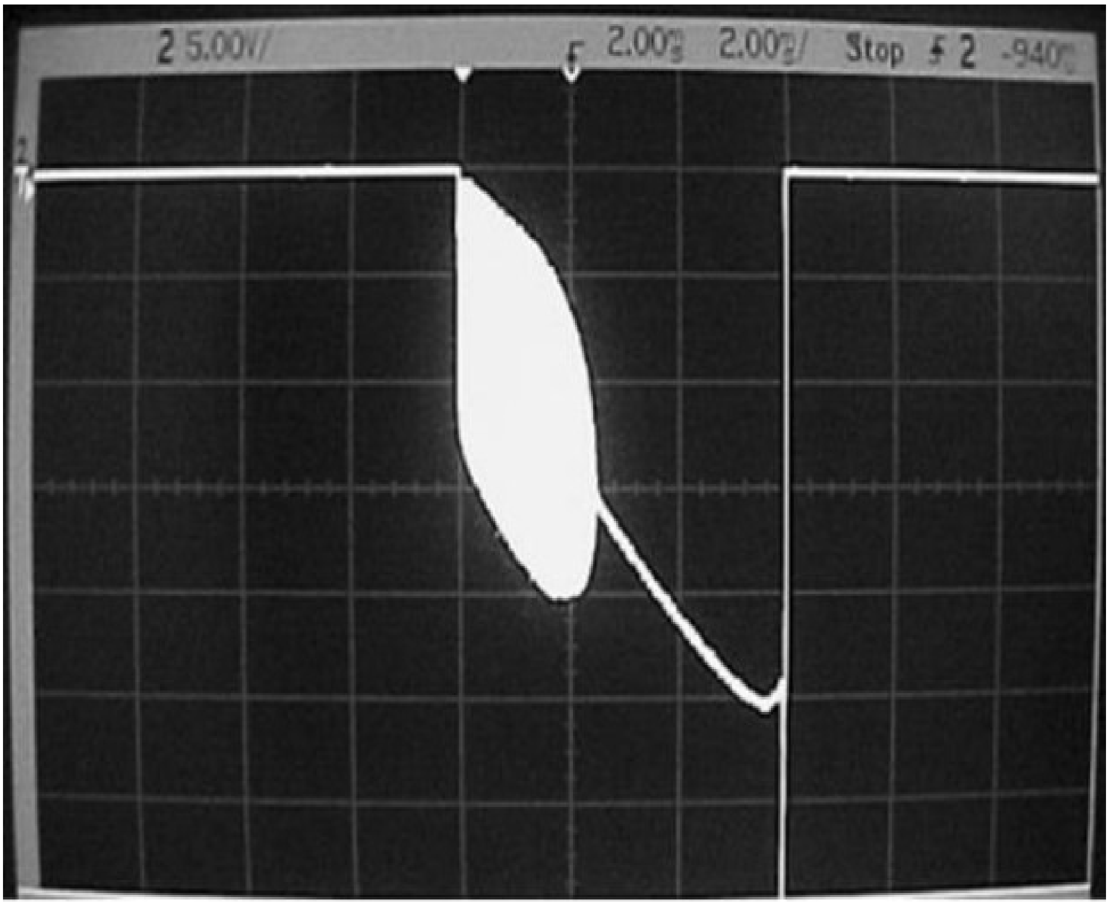


Fig. 8. Secondary oscillations inside the standard square electric pulse (6 ms) generated by the cells of Acetogens [1-10,16] electrotransformed using the Author’s Generator [11,16].

Due to the use of said electrotransformation / electrofusion Generator [6,11,16], we were able to create the commercial biocatalysts capable of production of fuel acetone (predecessor of fuel Diacetyl alcohol) or fuel 2,3-Butanediol from air CO_2 via the set of biochemical reactions [1-6,8,11]. The standard biocatalysts look is shown in Fig. 9

Fig. 9. The look of the Acetogen biocatalyst producing acetone from air CO_2 [6,7,8,11,16].

The carbon flux distribution in said Acetogen biocatalyst is shown in Fig. 10.

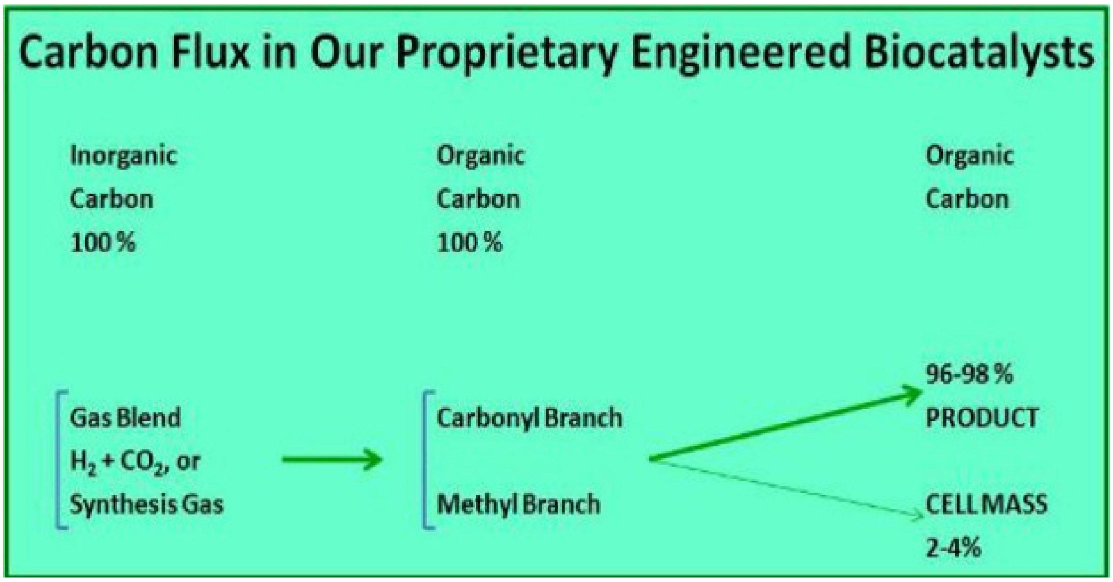


Fig. 10. The carbon flux in the Acetogen biocatalyst converting air CO_2 into acetone [1-1,11,16].

Therefore, now the life of the Author has changed significantly. From achieving his purely scientific and business progress goals now he has to worry much about personal safety and security of himself and of his businesses. Now the Author cannot go out and have a dinner in a restaurant unless he is accompanied by the group of the Security Officers. The business location has to be secured as much as possible by not only the Security officers, but also by the electromagnetic means of protection from ANY unauthorized invasion of the property by the means of the microwave radar protection. It is costly, but said cost in not compared to the cost of intrusion and damages created by said intrusion. Therefore, the business camp has to be located somewhere where there are no any other businesses operating. Such location invades intruders, unlawful the US border crossers and the respective US military personnel. Therefore, the site electronic protection has to include the means for the control of the potential intruders by the electronic means, as the Author does not know the kind of the intruders. If they are the FBI or something like that, any mechanical or the company Safety Officers checking will caused the length of the lawsuits which the Author would not be able to win, etc.

Now the Author has to be concerned about the quality and safety of the food he consumes to avoid food poisoning. That generates a lot of safety procedures and expenses related to that. For example, now the Author cannot go shopping as he did before. He has to arrange the food and other merchandise delivery on the corporate site, to check the vehicles delivering that, and then to organize the brought produce checking and consumption at the corporate site. That is not easy, that is time consuming and money consuming. But the overall gaol is still very simple - to save the Planet and to make moneys on that saving of the Planet. A lot of things therefore depend on the kind of people who will work for the Author on his business site. They have to be honest to ensure the proper testing and the delivery efforts as above.

The medical care. There is always the option to get hired the people with the exceptional health. However, the quality of such people as the R & D staff will be limited, etc. Therefore, there is the need to organize express communication between the corporate site and Houston or San-Antinio, if it is in TEXAS, or similar means for the transportation elsewhere. That means that from the short distance of several hundred miles the Author has to get the separate helicopter for the immediate use (the cost of maintenance, inspection, the pilot, insurance, etc.). If this is at above a thousand miles, there has to be the learjet. The cost of one helicopter now is above $1 million. Similar cost is for the learjet, and all of this is just to have someone from the company delivered to the Doctor fast. And also both the learjet and the helicopter require pilots, who's salary is in addition to the cost of the air vehicles.Therefore, now the Author has a lot of problems and said problems appeared right after the said attempted murder the author successfully survived. The Author is not mentioning how many times the KGB in the former Soviet Union tried to kill him, there is not space for that herein.

So, the Author has to be prepared to be in the constant war with the international petroleum corporations now after his attempted murder in Houston TEXAS, USA. For instance, there is the problem of disposal some liquid staff form the fermentors. Imagine, that there might be the Checking City Drain Waste team, which will not be the City Drain Checking team, but a team of the competitors masked as the City Waste Checking Team. Therefore, the Author has to be sure that NO BIOLOGICAL MATERIAL goes to the drain. That means there is the need for the extra expenses on doing that kind of the R & D and the team to do so. There is also the need to control such team on how they will handle the classified very private materials they will get, and to be sure that they will not get immediately to the competitors. Therefore, now the life of the Author has changed substantially after his attempted murder by SHELL.

The next step in the fuel Diacetyl alcohol use for the Diesel engines fueling will be the offering of the fuel Diacetyl alcohol for the fueling of the commercial air jets. These are the plans yet. We at our corporations will have to develop the substantial corporate security after that mentioned above corporate car totaling /attempted Author’s murder accident with the Author’s sincere intent to commercialize his Gasoline replacement fuel Isobutanol manufacturing technology [3,4,11,16]. The goal of the Author is to replace all the petroleum-based fuel manufacture on the planet Earth with his carbon negative technologies as that was published in the peer-reviewed journals since the Author did not have enough funds for the US patenting process.

Now after the attempted murder the Author has to take special care of his security. The only car to drive around will be the car with the security driver, which will be also used as the eventual witness of any undesirable interactions with any third party will show up during the car on business. Now, to go on a date with anyone, the author has to use only his corporate car with a security driver - no any privacy, but safe.

Special care has to be taken about the food to consume by the Author and his Senior Executives along with some other personnel associated with access to the secure information on the carbon negative technologies. That creates a lot of problems which have to be addressed immediately. First, the living of said people has to be on the corporate site protected by the special microwave tools of search and disablement of any third party. This might be the expensive set of radars used for the commercial ships. Radar is based on the intensive microwave irradiation towards the object to be examined for the safety purposes. Using radar microwaves it is possible to find the metal weapons in the clothing of the third parties. That might be possible to disable the electronic systems of any vehicle which harasses said business settlement.

Intensive microwave irradiation eventually causes psycheartic deviations in anyone subjected to that. Said electrically induced hallucinations affect the “damaging” the Author and his businesses capability of any third party not desirable anywhere near said business settlement. Now imagine that the subordinate of the

Author decides to share the confidential information on the topics they work during business hours at the corporate sight protected by said radar microwave Security System. Said microwave might be directed at the particular person of interest generated by his previous actions of suspicious behavior to watch said person all the time across the walls made of any construction material. Said walls become completely transparent and allow to watch that person 24/7/365 before said person will be officially fired and removed from the business operations protected site.

So, the food for the corporate consumption will be safe. You might remember that certain poisoning could be added to the food. The properly stored at the grocery store food will have the packages which will be checked by the Security personnel after their delivery. There are the grocery stores around. That might be possible to make the arrangements at the top State Security level on that. That might be possible to arrange the delivery of the consumer goods from said grocery stores directly to the protected business site. The delivery will be conducted by the store car which will be checked for any interference by the third party. He food will be distributed among the corporate employees during their time they are free from their work.. That will eventually safe a lot of driving time for said workers of the Author and the Author himself. The business site will be cleaned by the Mexicans living nearby after their thorough checking at the entrance.

Classified work will be performed by the foreigners the Author plans to hire. Their mobile phones and other communications tolls will be all recorded during the off work time. The work time will not allow said foreigners to use any personal communications tolls as that will be in the work contract agreements.

Security during the personnel vacations. Said personnel hired by the Author under the work contracts will be advised on the impossibility for them to contact any third party during their vacations. Most likely said vacations have to be performed on the special resorts with the enhanced security unless the Author will desire to occupy himself with the resort sort of industry above his carbon negative and water distilling projects he has to be done over his corporate work for the World and for the US, specifically.

Again, the Author's idea is the raising the venture capital to set up the network of the gas stations in the area nearby with the subsequent distribution of said carbon negative gas stations Nationwide. This is the gift the Author plans to present to the United States which allowed him to run his carbon negative projects and his water distillation projects as planned. Said carbon negative gas stations will additionally serve foods for the customers unlike the current gas stations do.   The food to be served has to be served by the additional personnel as the personnel of the grocery stores. This is all directed to protect the customers time during their attempts to fill the gas tanks of their cars. Then customers will not need to drive to the grocery stores, they could get the food they need right at the carbon negative gas stations. That means said carbon negative gas stations have to have enough space for said grocery operations unlike the current gas stations do.

Thew Carbon Negative Gas Station Plan is below.

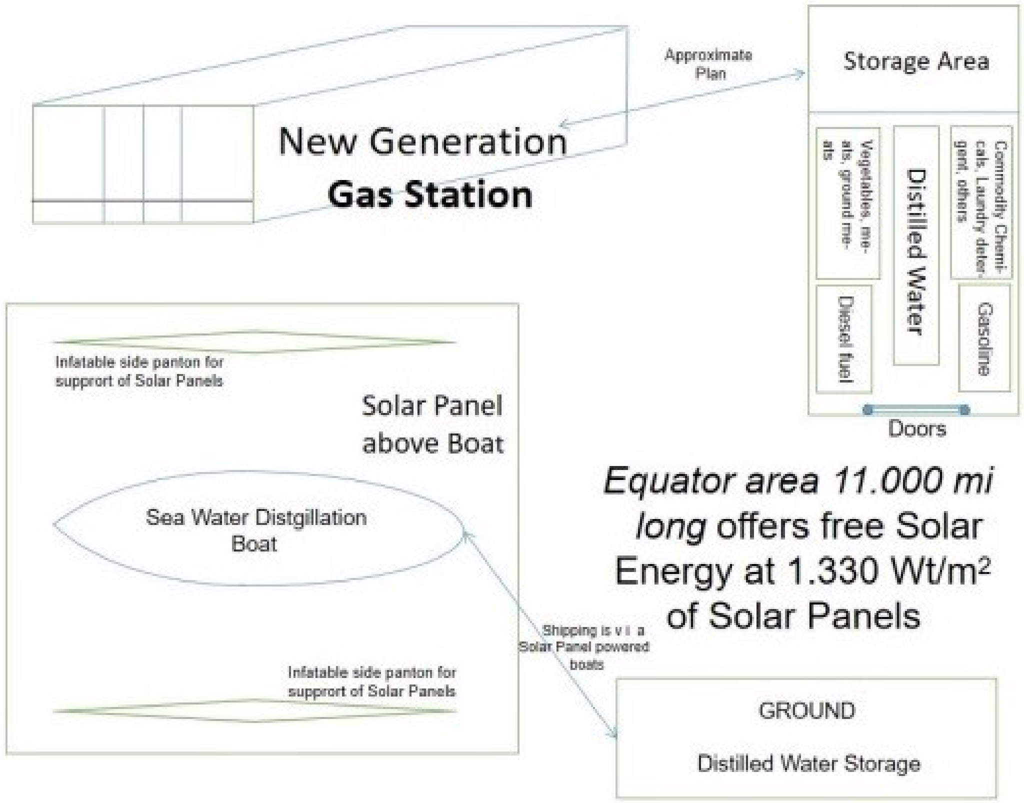

New Generation
Gas Station
Approximate Plan
Storage Area
Vegetables, me-ats, ground me-ats
Distilled Water
Commodity Chemi-cals, Laundry deter-gent, others
Diesel fuel
Gasoline
Doors
Infatable side panton for supprort of Solar Panels
Solar Panel above Boat
Sea Water Distgillation Boat
Infatable side panton for supprort of Solar Panels
Shipping is v i a Solar Panel powered boats
Equator area 11.000 mi long offers free Solar Energy at 1.330 Wt/m2 of Solar Panels
GROUND
Distilled Water Storage

Fig. 11. The Plan of the consumer time saving Carbon Negative Gas Station.

Therefore we have made a substantial proposal to any party interested in our discoveries of the coming to Earth shortage of the fresh water and associated with that shortage of production of crops and livestock, eventually the shortage of the meat-based food for the Humankind.

Tremendous therapeutic effect of the surface polysacchardes produced by the isolated from the intestine of the Author intestinal *bifidobacteria B. bifidum, B. breve and B. longum. Said therapeutic effect shortened the recovery time for the damaged by the Cholera infection gastro-intestinal epithelium of young and adult patients suffering from the gastreo-intestinal infection caused by Vibrio cholerae to about 7-9 days instead of normally occurring 21-36 days.*

The Author has isolated from his own intestine strains of bifidobacteria B. bifidum, B. breve and B. longum. For the isolation he used the invented by the Author prior to that selective medium for the isolation of bifidobacteria from feces [52] of the following composition, g/l:

Caseine Tryptone	10.0
Yeast Extract	5.0
Avocado/soybean extract	5.0
Meat extract	10.0
Tween 80	1.0 ml
K_2HPO_4	2.0
Ammonium 2-hydroxypropane-1,2,3-tricarboxylate (ammonium citrate tribasic)	2.0
$MgSO_4 \times 7\ H_2O$	0.2
$MnSO_4 \times 4\ H_2O$	0.05

Agar-agar powder [53]

pH prior to autoclaving for 35 min at 0.5 Atm

Prior poring to Petri dishes [54] the medium after its autoclaving was cooled down to about 42-43 °C and the powder of Norfloxacin [55] was added to the medium aseptically in the laminar cabinet [56] to its final concentration of 200 microgrm/ml of the Selective medium for bifidobacteria isolation.

Said bifidobacteria had extracellular polysaccharides produced abundantly in the liquid medium similar by its composition to the selective medium but the agar-powder and Norfloxacin were omitted. Said polyscacharides were isolated in the amount of 20 g each. Said polycassharides were mixed and taken for the approbation of their intestinal use for the recovery of the patinets which suffered sudden Cholera intestinal infection outbreak in the native city where the Author was born, in Saratov, the Russian Federation. Said epidemiological outbreak was totally controlled by the infectionists of Saratov State Medical University. Said infectionists have made multiple images of the intestinal epithelium of the recovering patients, both children and adults. The polyscacchardes Mixture (we will call it “:Mixture” further) was used to make the solution with the final concentration of each of the three polysaccharides of 0.1 g/l. Said mixture was given by about 5 ml to each recovering adult and child patient (40 and 40 people were treated) along with the antibacterial therapy which was the ampicillin trihydrate tablets of 0.5 grams each tablet two tablets per taking every four hours (6 grams per day per patient). That antibacterial therapy was mandatory fro all affected with the cholera infection. 40 adults from 18 to 72 yo and 40 children from 3 to 176 you were given the "Mixture" to shorten the recovery after the Cholera infection as to investigate the "Mixture" for its possible clinical trials in the US.

Said "Mixture" had tremendous therapeutic effect in shortening the the recovery time of the affected by Cholera epidemiological outbreak in the Saratov region of the Russian Federation. The shortening was to 7-9 days vs regular for Cholera 21-36 days. The images the infectionists from Saratov State Medical University presented to the Author for no money he had to pay to them fro that. Said images are shown below.

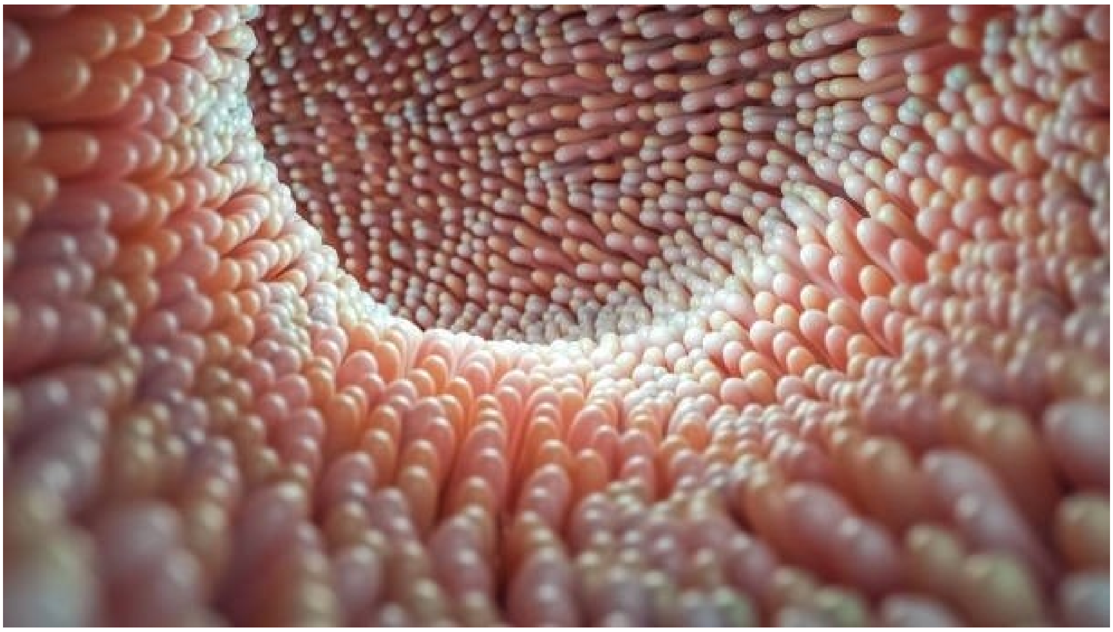


Fig. 12. Epithelium of Duodenum of the 3 yo patient, the 7th day of "Mixture" use and antibacterial therapy. This Image was presented

to the Author by the infectionists of Saratov State Medical University.

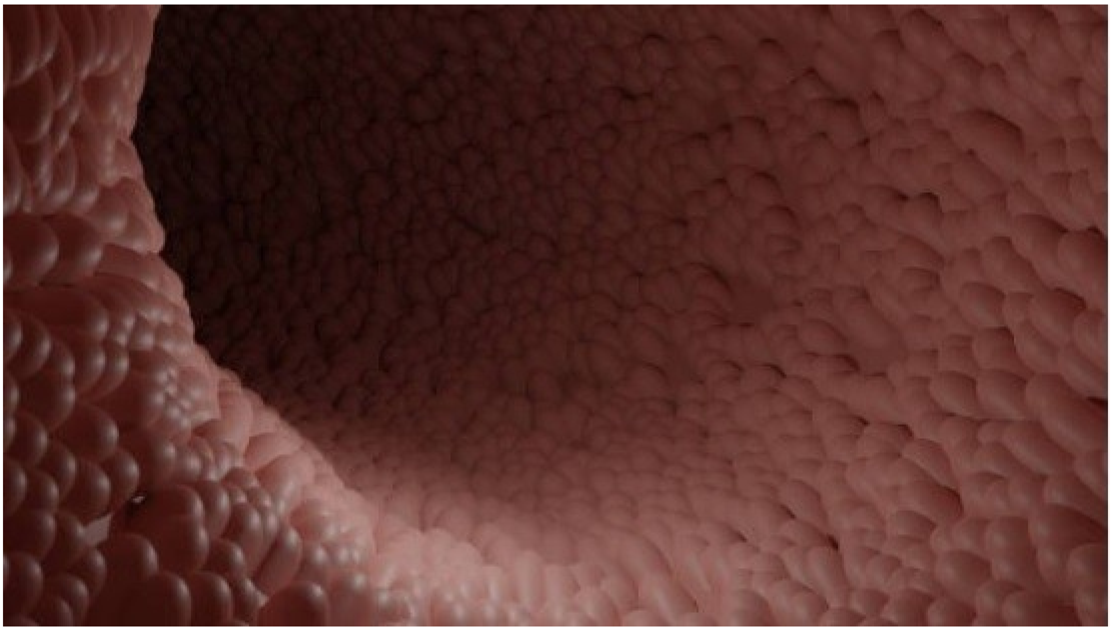


Fig. 14. Ileum epihtelium of the 36 yo patient, 8th day of recovery using “mixture” and antibacterial therapy. This Image was presented to the Author by the infectionists of Saratov State Medical University.

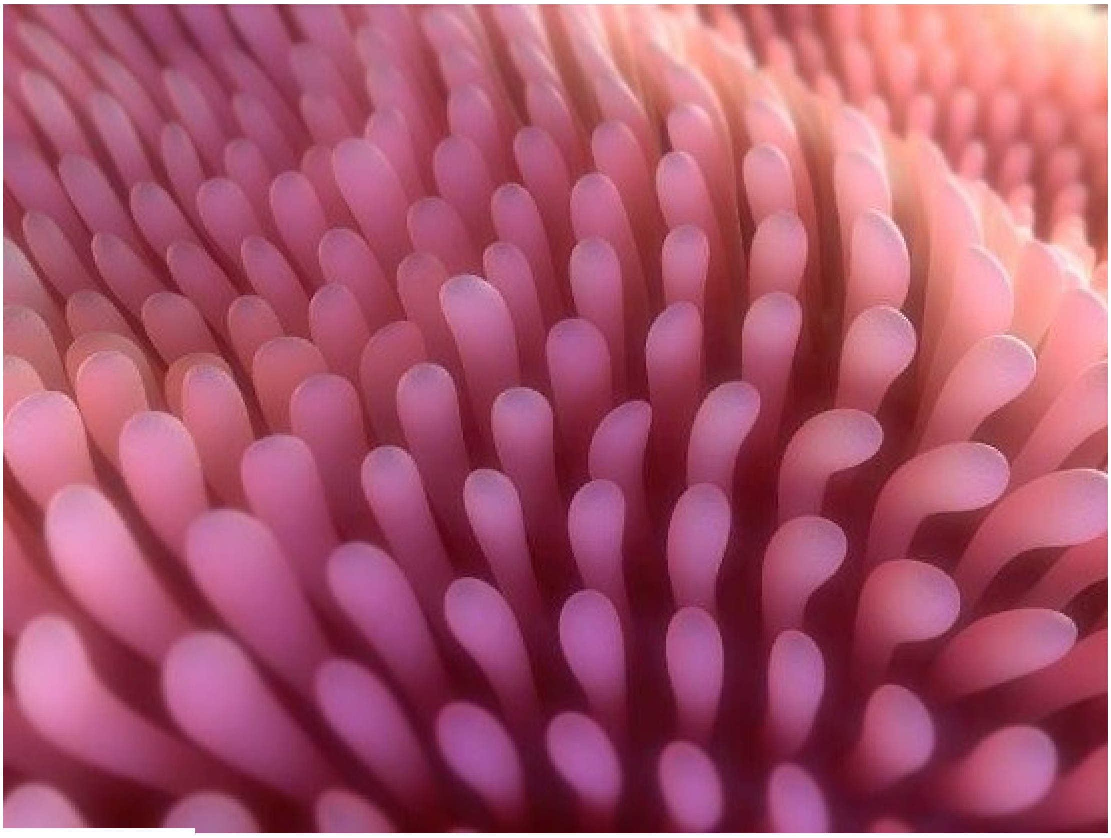


Fig. 15. Lower section of the small intestine of the 56 yo patient. 9th day of taking “mixture” solution along with the antibacterial therapy. This Image was presented to the Author by the infectionists of Saratov State Medical University.

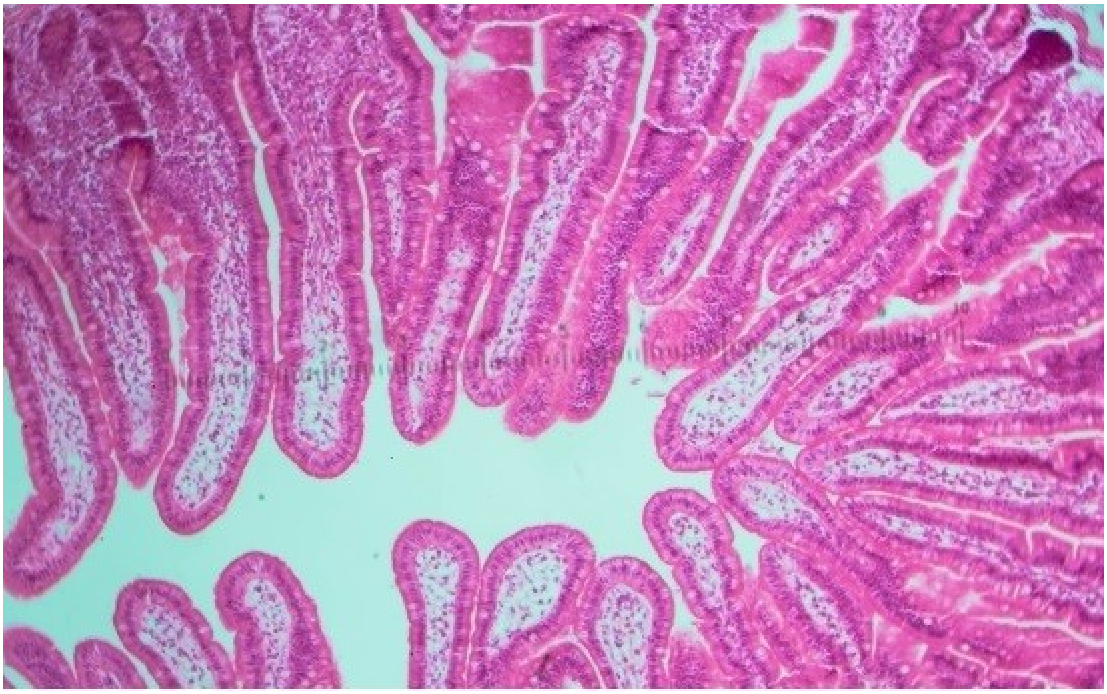


Fig. 16. Stomach of the 13 you patient on the 7th day of taking “Mixture” and the antibacterial therapy. This Image was presented to the Author by the infectionists of Saratov State Medical University.

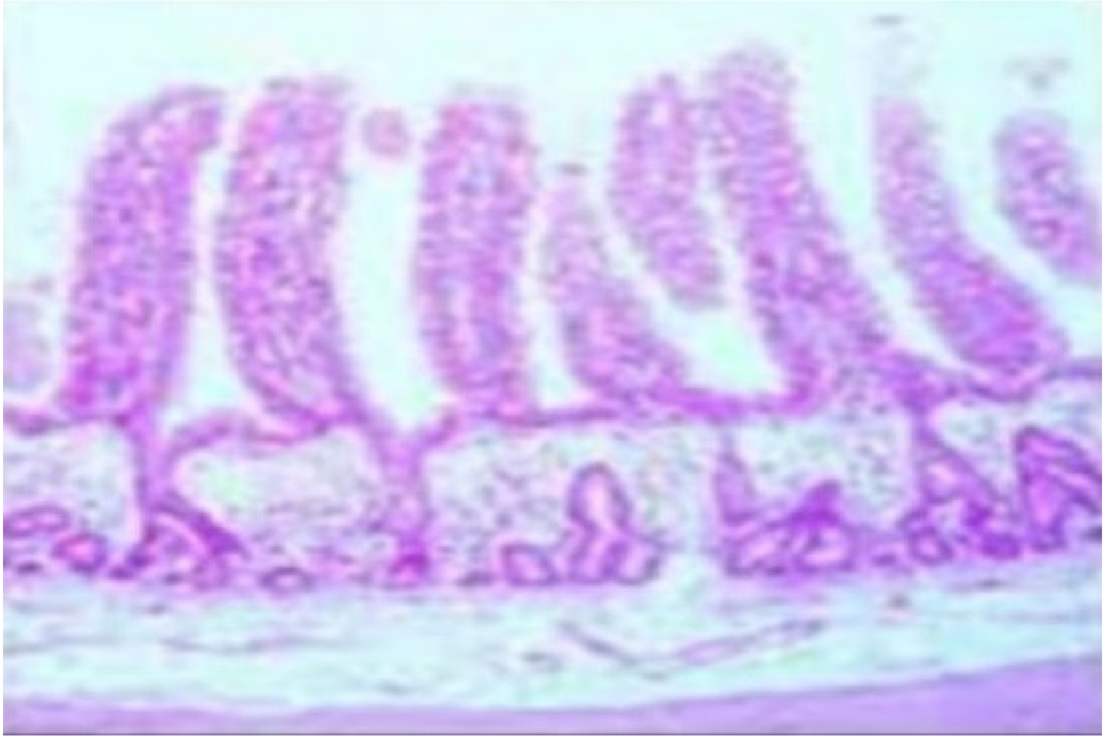


Fig. 17. Stomach of the 26 yo patient on the 8th day of taking "Mixture" along with the antibacterial therapy. This Image was presented to the Author by the infectionists of Saratov State Medical University.

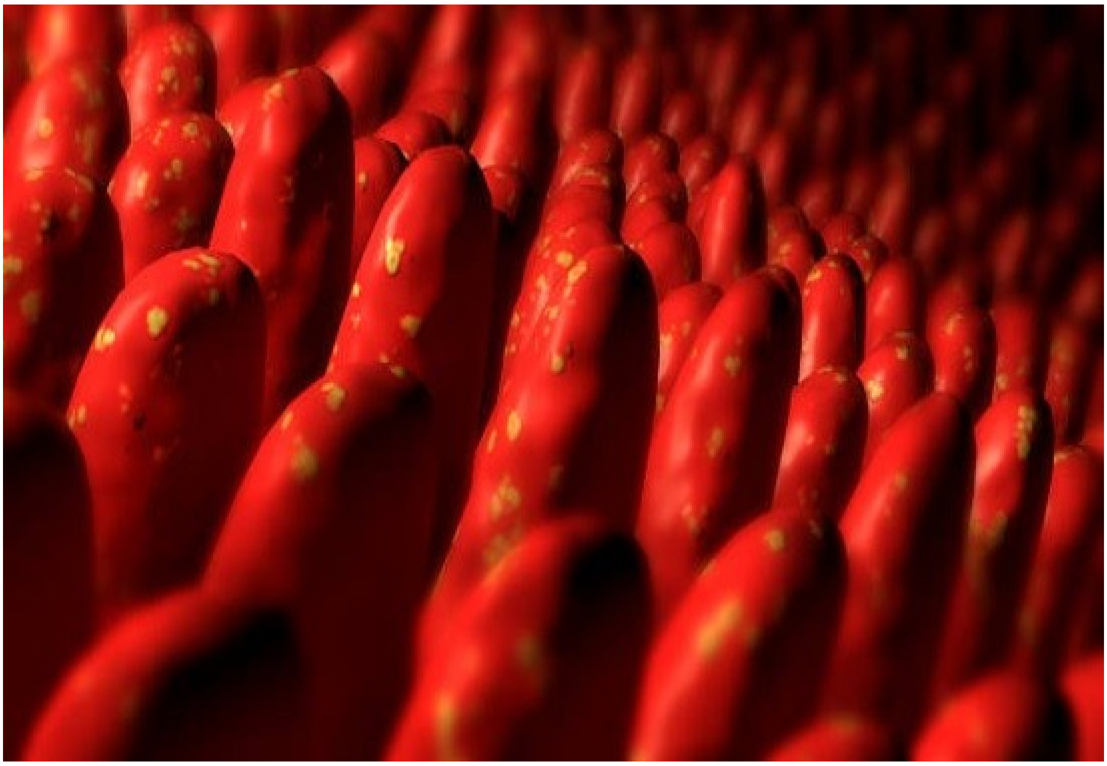


Fig. 18. Duodenum of the 15 yo patient of the 9th day of taking "Mixture" along with the antibacterial therapy. This Image was presented to the Author by the infectionists of Saratov State Medical University.

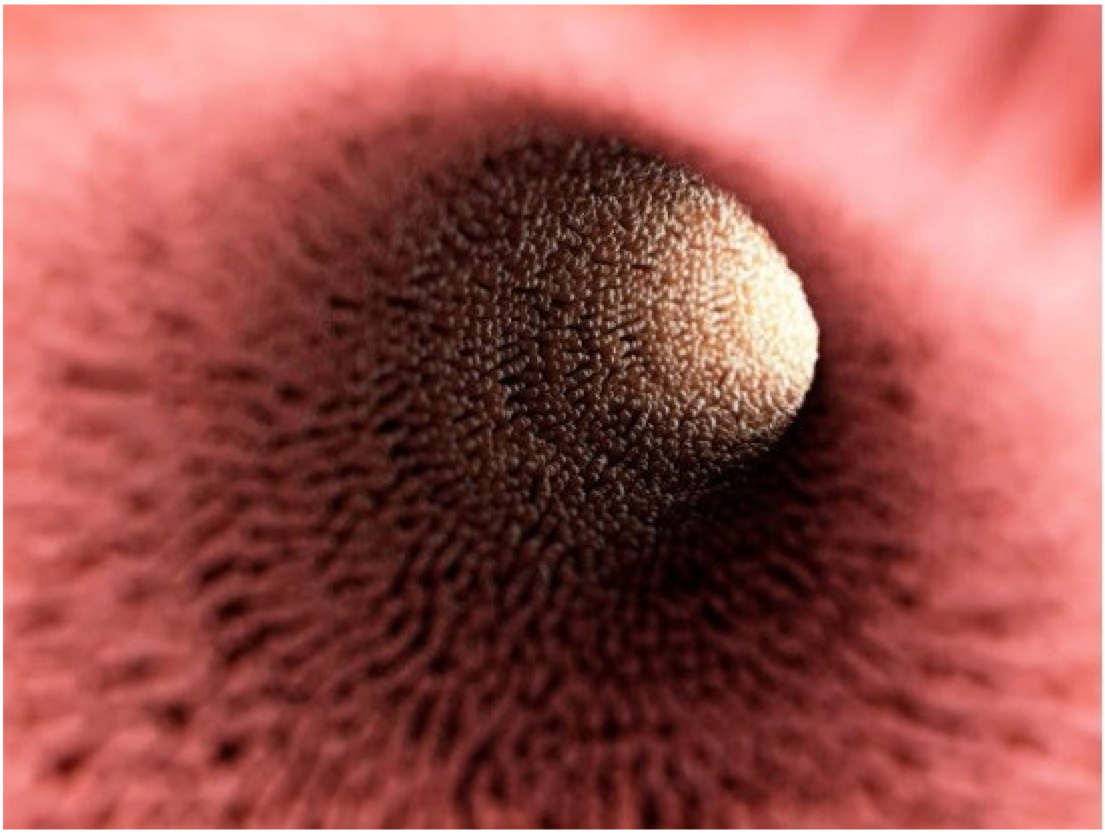


Fig.19. Jejunum of the 39 yo patient on the 9th day of taking the “Mixture” along with the antibacterial therapy. This Image was presented to the Author by the infectionists of Saratov State Medical University.

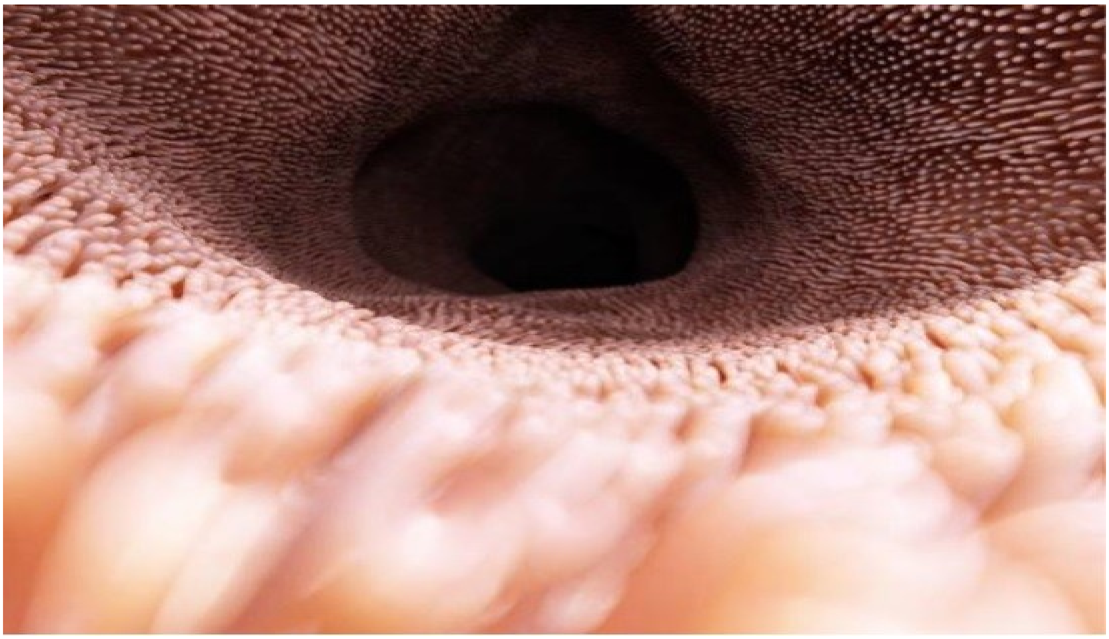


Fig. 20. Doudeno-jejunal junction of the 12 yo patient on the 7th day of taking “Mixture” and the antibacterial therapy. This Image was presented to the Author by the infectionists of Saratov State Medical University.

Fig. 21. Ilium of the 69 yo patient on the 8th day of taking “mixture” and the antibacterial therapy. This Image was presented to the Author by the infectionists of Saratov State Medical University.

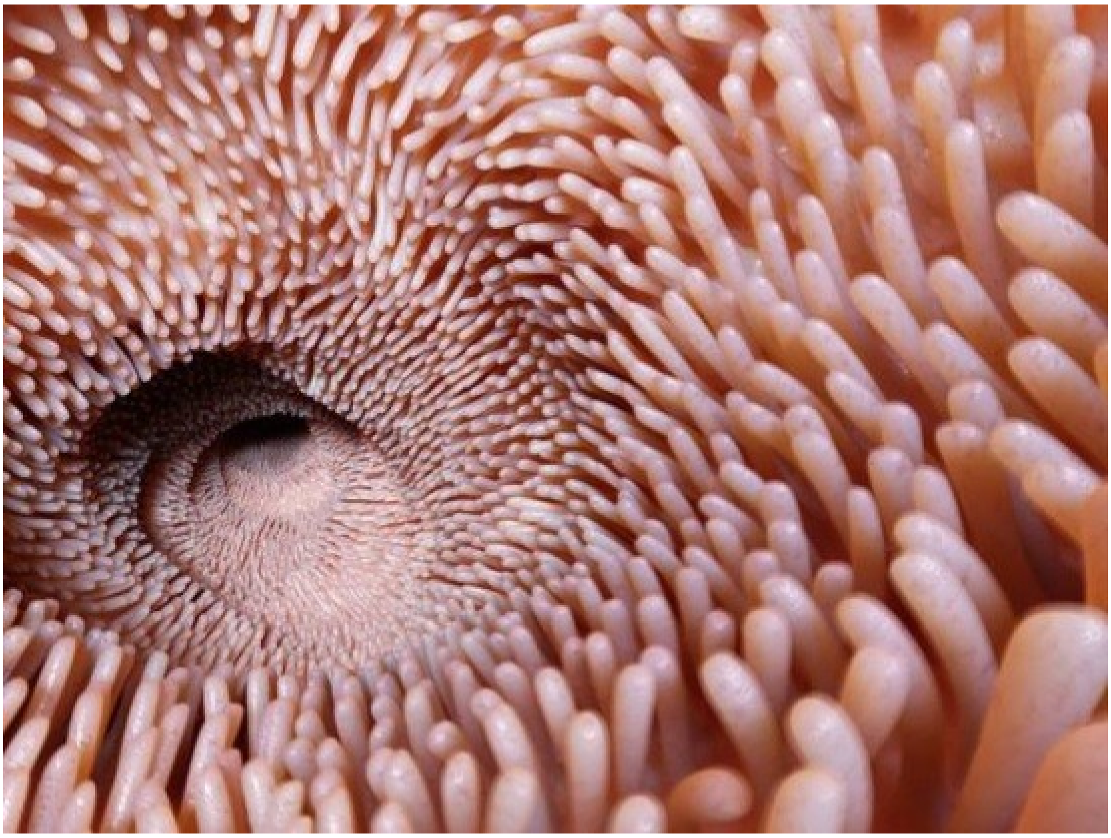


Fig. 22. Lower stomach of the 75 yo patient on the 9th day after taking “Mixture” and the antibacterial therapy. This Image was presented to the Author by the infectionists of Saratov State Medical University.

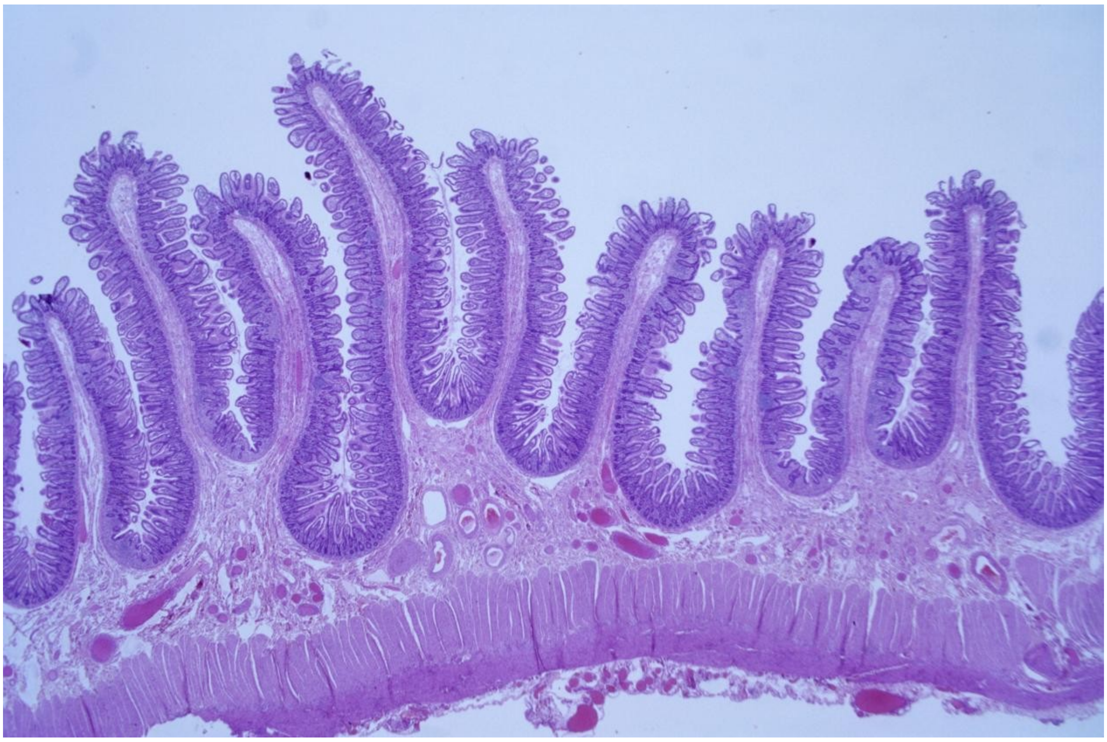


Fig. 23. Duodenum of the 6 yo patient on the 7th day of taking “Mixture” along with the antibacterial therapy. This Image was presented to the Author by the infectionists of Saratov State Medical University.

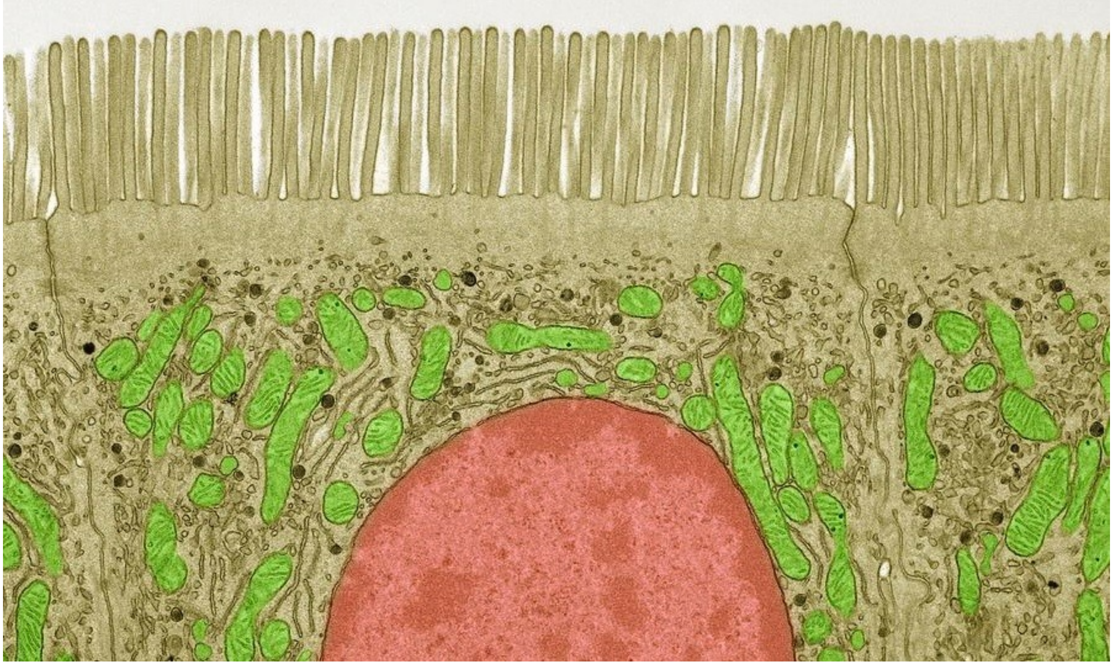


Fig. 24. Ilium of the 46 yo patient on the 8th day of taking “Mixture” alon with he antibacterial therapy. This Image was presented to the Author by the infectionists of Saratov State Medical University.

Presented images display pretty normal state of the intestinal epithelium suggesting that “Mixture” has tremendous therapeutic effect in the gastro-intestinal epihtelium recovery after it was totally damaged by the Cholera infection in the patients of the noted adult and young groups in this epidemiological outbreak in Saratov region of the Russian Federation. Therefore the presented herein data suggest that we might subject of proprietary “Mixture” to the clinical trials in the US and after their approval said “Mixture” might be recommended for the wide National use in all the patinets in which the gastro-intestinal disorders have become prominent and who cannot find any food at the grocery stores to have their intestines work as in normal people.

We have made our promise to provide the Humankind with the plenty of the genetically engineered food during the times of shortage of the crops and the livestock production. That will strongly depend on our capability to raise essential funds form the investors.

We have made herein our promise made to organize the system of the Carbon Negative Gas Stations (Fig. 11) around the United States. The purpose of said Carbon Negative Gas Stations will be to ensure the customers get enough carbon negative Gasoline and the Diesel fuel. To save precious time of our customers we offered to the public the Carbon Negative Gas Stations combined with the kind of the grocery stores offering to buy the foods from the regular grocery stores. During the anticipated time of shortage of the crops and the livestock production due to the shortage of the fresh water water we have offered to compensate said shortage of the crops and the livestock production by the our own production of the genetically engineered foods based on the carbon dioxide consuming genetically engineered fungi for the eventual sales at said Carbon Negative Gas Stations. Basically this is our own step in the wear with the International Petroleum Corporations started by SHELL via the attempt to kill the Author. The Author has discovered the absence of any civil and criminal laws in the State of Texas where the Governor is Mr. Gregg Abbott who will eventually suffer from the expansion of the Author’s intent to find the [proper federal laws in the US Supreme Court where he is eventually going to bring this case of the attempted killing of the Author by the based in Texas International Petroleum Corporation SHELL as stated in the respective Police Report of the Houston Police Department.

Genetically engineered foods [48].

Genetically engineered foods have had their DNA changed using genes from other plants or animals. Scientists take the gene for a desired trait in one plant or animal, and they insert that gene into a cell of another plant or animal.

Genetic engineering can be done with plants, animals, or bacteria and other very small organisms. Genetic engineering allows scientists to move desired genes from one plant or animal into another. Genes can also be moved from an animal to a plant or vice versa. Another name for this is genetically modified organisms, or GMOs.

The process to create GE foods is different than selective breeding. This involves selecting plants or animals with desired traits and breeding them. Over time, this results in offspring with those desired traits.

One of the problems with selective breeding is that it can also result in traits that are not desired. Genetic engineering allows scientists to select one specific gene to implant. This avoids introducing other genes with undesirable traits. Genetic engineering also helps speed up the process of creating new foods with desired traits.

The possible benefits of genetic engineering include:

- More nutritious food
- Tastier food
- Disease- and drought-resistant plants that require fewer environmental resources (such as water and fertilizer)
- Less use of pesticides
- Increased supply of food with reduced cost and longer shelf life
- Faster growing plants and animals
- Food with more desirable traits, such as potatoes that produce less of a cancer-causing substance when fried
- Medicinal foods that could be used as vaccines or other medicines

Some people have expressed concerns about GE foods, such as:

- Creation of foods that can cause an allergic or toxic reaction
- Unexpected or harmful genetic changes
- Inadvertent transfer of genes from one GM plant or animal to another plant or animal not intended for genetic modification

- Foods that are less nutritious

These concerns have thus far been unfounded. None of the GE foods used today have caused any of these problems. The US Food and Drug Administration (FDA) assesses all GE foods to make sure they are safe before allowing them to be sold. In addition to the FDA, the US Environmental Protection Agency (EPA) and the US Department of Agriculture (USDA) regulate bioengineered plants and animals. They assess the safety of GE foods to humans, animals, plants, and the environment [49].

Article Summary

1. Fresh Water Shortage is anticipated in the next 10 - 25 years.
2. The Solution: replacement of current economy with carbon negative economy and carbon negative fuels use only might take about 70 years.
3. Anticipated Global Starvation on Earth might be resolved via massive manufacture of genetically engineered carbon negative foods.
4. Set of surface polysaccharides produced by *Bifidobacterium bifidum*, *B. breve* and *B. longum* naturally present in the intestine of the Author has remarkable therapeutic effect in restoration of affected by intestinal infection cholera gastro-intestinal epithelium for remarkably short time of 7-9 days instead of normally occurring 21-36 days of the epithelium recovery.

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Chapter 8. Sea Water Distillation as the Way to Fight Fresh Water Loss to the Outer Space

Abstract

Shortage of fresh water is coming to Earth in the next 10-25 years. Shortage of fresh water means the shortage of crops and livestock production. Shortage of that leads to the Global starvation on Earth. The Author offers his new type of the gas stations selling not only the Carbon Negative fuels but also the foods for home cooking including the genetically engineered Carbon Negative foods. Fresh water for laundry and bathing might be also possible. But this will require a lot of political work with the elected officials to do that.

Introduction

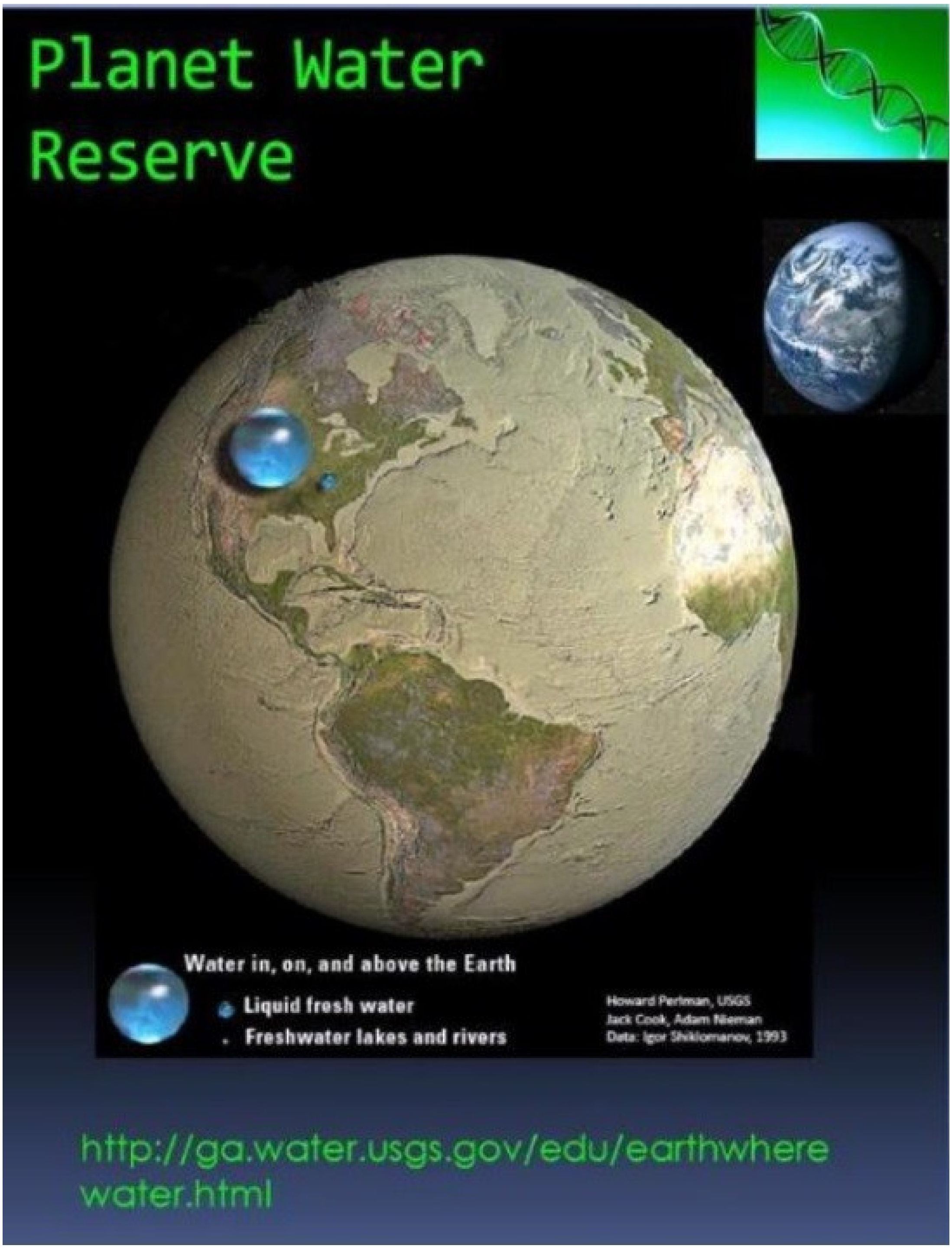
That sounds very reasonable to us and we will try to convince all of our readers, might be they will convince the Governmental officials that the shortage of fresh water is really coming very soon, it has already started now from the global changes of the weather, named as Global Warming [1]. What the shortage of the fresh water means and why it is that dangerous since it deserves the quick economic actions of the Senior Executive branch of the US Government to act properly? Shortage of the fresh water means no crops and livestock production. And that is the Global Starvation on Earth to which we have to be prepared. That is why we are addressing this article to the global international and national policy makers.

Now, to the details of my concern. This is a global environmental problem which is determined the by the level of the air CO_2. Who emits air CO_2 and why it is dangerous fro the Earth environment? All living beings emit the air CO_2. All transportation means emit the air CO_2. Who emits more? Obviously, not the living beings. The transportation is the general producer of the air CO_2. That appears that burning of any kind of fuel in the engines produces the air CO_2. Literally the revolution was the decision of Mr. Elon Mask some time back to initiate the manufacture of the electrically driven car Tesla. That is the solution compared to the internal combustion engines and diesel engines. Dr. Rudof Diesel who has invented the Diesel engines at the beginning of the 20th century never anticipated that his invention brings molecules detected the air CO_2 level as 410 ppm. Now it exceeds 450 ppm [2]. What the chemistry tells us about ppm? It tells us that per 1 million of air gas blends molecules 450 molecules are the air CO_2 molecules [3]. And we not discussing the increased air jet turbines use as the source of the air CO_2 production. The transportation burns fuels produced by the international petroleum corporations from petroleum as the major source of the air CO_2 levels [4]. In weight of solute per volume of solution (w/v or m/v) terms, 1 ppm = 1g m^{-3} = 1 mg L^{-1} = 1 μg $mL^{-1.}$ In weight of solute per weight of solution (w/w or m/m) terms, 1 ppm = 1 mg kg^{-1} = 1 μg g^{-1} [3]. Sometimes when researching concentrations of GHGs, scientists will talk about concentrations of CO_2 or CH_4 in terms of **parts per million** (ppm) or parts per billion (ppb) because the amounts are so small. For example, a concentration of 1 ppm corresponds to 1 part material per 1 million parts of the gas, liquid or solid it is found in [3]

For years scientists have said that if atmospheric levels of air CO_2 reach 450 parts per million (ppm) the planet would heat up by an average of 2 degrees Celsius above pre-industrial levels. They have also said that if the world crosses that threshold, ecosystems worldwide would suffer serious damage. The IPCC data, however, indicated that levels of 425 to 485 ppm would correspond to a temperature increase of 1.3 to 1.7 degrees C by 2100 [1,2].

CO_2 selectively absorbs the solar infra red energy converting it to heat [5] "CO_2 selectively absorbs solar infra red energy since it has a certain resonance frequency that corresponds to the energy of light. When infra red light hits a CO2 molecule it excites the molecule and causes the molecule to vibrate. This vibration energy is converted to heat." [5].

The following Figs. explain my concern in detail. The last image (Fig. 2) iss solely for the Ground in touch with the bottom layer of CO_2 in the atmosphere air blend. Fig. 1 Is the Governmental understanding of the water Reserves on Earth [6]. Fresh water is painted like very small balls compared to the size of the ocean water bigger ball. Fig. 2 explains our understanding how fresh water evaporates from the Ground the refuge of the fresh water on Earth. Fresh water evaporates to the Space vacuum which is the other side of the atmosphere which is only 400 miles wide layer over the Ground and the ocean / sea salty water.



Planet Water Reserve

Water in, on, and above the Earth

- Liquid fresh water
- Freshwater lakes and rivers

Howard Perlman, USGS
Jack Cook, Adam Nieman
Data: Igor Shiklomanov, 1993

http://ga.water.usgs.gov/edu/earthwherewater.html

Fig. 1. Water reserves of Earth [6].

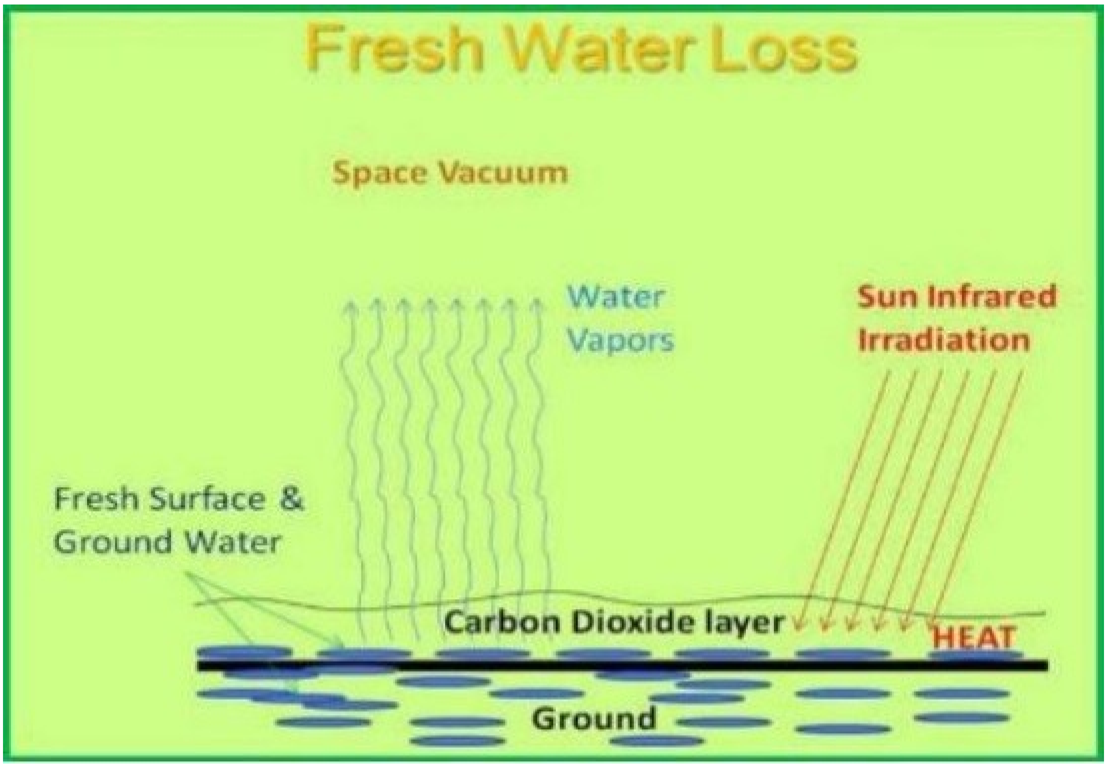


Fig. 2. Loss of the fresh water vapors from the Ground to the Outer Space vacuum [7].

Fig. 2 does not explain the fresh water evaporation from the ocean / sea salty water. We might explain this via the changes in the Houston weather. The Author came to Houston for the first time 25 years back. He was absolutely surprised with the bottomless blue Houston sky which was quite different from the places the Author lived before. Now, 25 years later, we might watch the blue bottomless sky early in the Morning, at about 5- 5:30 AM. Te the sky starts getting covered with the clouds. The clouds are small but in the multitude, then they get condensed into the bigger clouds and such bigger clouds often render atmospheric electricity discharges (thunder, sparks during the thunder). Often rain becomes possible and this is not like that was observed by the Author 25 years back when he came to Houston from Moscow, the Russian Federation. Where said clouds come from? This is a good question with the especially Southern wind accompanying said change of the Houston weather. Apparently said clouds are the result of the condensed evaporated from the Gulf of Mexico fresh water. The Author is not competent now on the salty water becomes boiling or not, the phenomenon at the excess of the air CO_2 like blanket covering the salty water of the Gulf of Mexico. Rain if possible is always good for the fresh water collection to the Ground but the main issue is the amount of the fresh water evaporated under said conditions from the Gulf of Mexico. With the increase of the air CO_2 over said 25 years to and above 450 ppm causes this change of Houston weather. Similar changes are typical for other locations on Earth. The overall amount of evaporated from Ground and sea / ocean fresh water is tremendously higher than 25 years back. Why 25 years sows up her and there again and again? Because we claim now that the environmental catastrophe on Earth is anticipated in the next 10-25 years from now. This repeated 25 years is given as the example how the global international petroleum corporations increased the air CO_2 level to environmentally critical levels. This is our explanation of Fig. 2 and not painted herein in this article fresh water collection from over the ocean / sea water around the globe.

Let us cite the internet again and in relation on how much Solar light energy and where such Solar energy is applied. [8] sells solar panes to customers around the World, with the special notes on where the sun energy in the most intensive. Fig. 3. shows the areas of the most available and the strongest one.

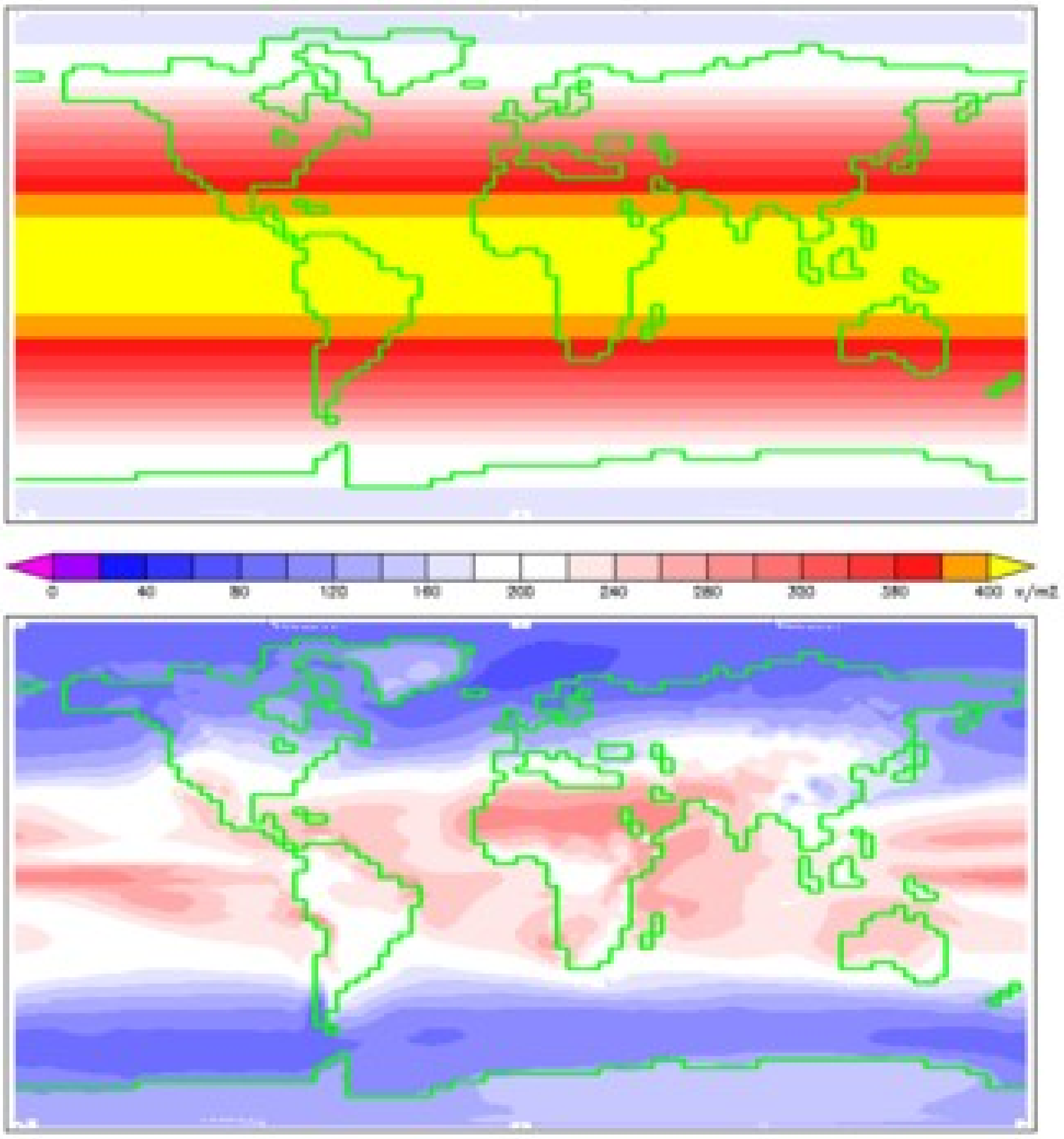


Fig.3. The predominance of the Solar light energy to the Equatorial areas of earth.

As per the recent measurements done by NASA, the average intensity of solar energy that reaches the top atmosphere is about 1,360 watts per square meter in the Equatorial areas of Earth. The solar light energy decreases substantially to the poles of our planet. [9]. For instance when the Author joined Celanese Chemicals Reserach Center in Corpus Christi, TX, the workers he spoke with mentioned him that in Houston area it was possible to collect two harvests of corn per year. While down South from Houston in McAllen, TX area the farmers already collect three harvests of corn over a year.

The 60-cell solar panels are 5.4 feet long and 3.25 feet wide. They possibly give an output of about 270 watts to 300 watts. They are suitable for residential areas. The size of a 72-cell solar system is the same, just they have an extra row of cells. The average output from 72-cell solar panels ranges between 350 watts to 400 watts. They are used in commercial solar projects and large buildings. The conversion rate of silicon-based solar panels is between 18% and 22% of the total sunlight received by them. It led them to exceed 400 watts of power. The solar panels with the highest efficiency up till now were developed by the National Renewable Energy Laboratory (NREL). It has 39.5% efficiency [9]..

Until now we mainly wrote abut the fresh water losses. The corporate goal of the corporations owner by the Author is to supply enough distilled water made up from the sea water to compensate the coming fresh water shortage projected in the next 10-25 years due to the overproduction of the air CO_2 as discussed above.

As we have discussed before we will have the Gasoline and the Diesel fuel replacements at our new type of gas stations. The Gasoline raplacemetns were discussed before, the Diesel fuel replacements will be as we have discussed that before [14-20].

Materials and Methods

The geographical place to get the most possible Sun light for powering of the solar panels

We projected our corporate facilities near town Brownsville, TX. Thre is also the University of TX system there which will bring to us all the necessary for business operations staff if any will be necessary. Te area near Brownsville is still in the USA and we very much appreciate the presence of the acting federal and local laws in the at area. Obviously down South in Mexico the Sun light is absolutely stronger however the absence of the US laws will not encourage us to have our corporate location outside of the US.

The set of the new the of the gas stations

As we have discussed that before we have the intent to find the investor's funds sufficient enough to organize initially in this area, then Nationwide the set of the new the of the gas stations shown in Fig. 5.

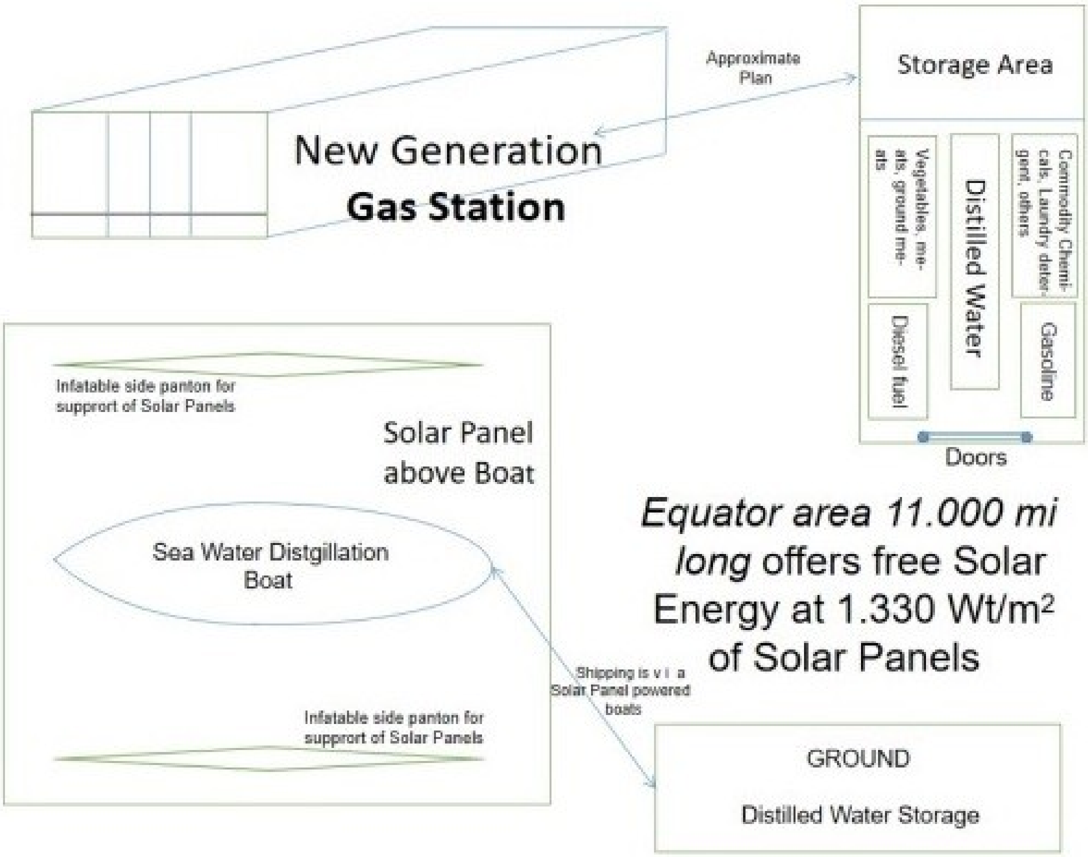

Approximate Plan
Storage Area
New Generation
Gas Station
Vegetables, meats, ground meats
Distilled Water
Commodity Chemicals, Laundry detergent, others
Diesel fuel
Gasoline
Doors
Infatable side panton for supprort of Solar Panels
Solar Panel above Boat
Sea Water Distgillation Boat
Equator area 11.000 mi long offers free Solar Energy at 1.330 Wt/m^2 of Solar Panels
Shipping is v i a Solar Panel powered boats
Infatable side panton for supprort of Solar Panels
GROUND
Distilled Water Storage

Fig. 5. New type of the gas stations.

As Fig. 5 shows, the new gas station will be selling only Carbon negative fuels to power gasoline and diesel fuel cars / trucks. It has the areas for selling of the Carbon Negative Gasoline replacement and the Diesel fuel replacement mixtures. We have discussed the composition of said fuel mixtures before [10]. It is important that the new type of our gas stations will sell foods fro the home cooking of our valuable customers to save their time for visiting additionally the grocery stores. The food will be presented the regular one and the Carbon Negative genetically engineered food. In the time of the severing of the ecological crisis there will be the shortage of the livestock and the crops manufacturing. To compensate that we plan to organize our corporate efforts to develop the technologies of the manufacturing of the genetically engineered foods which will be Carbon Negative.

To do that we plan to use the regular mushroom cells and to introduce inside them the genes responsible for production of the muscle fibers of lambs and beef. The mastery which we have achieved in the development of the Acetogen-based biocatalysts to manufacture the Carbon Negative fuels, that mastery gives us the promise to create the Carbon Negative mashroom-based genetically engineered foods for sales at the new type of the gas stations for the home cooking of our valuable customers. We are sure that the success in any our direction towards our mail purpose to substitute the missing preducts due to the worsening of said environmental crisis on Earth. Speaking of the genetically engineered meats we plan also the organizing of the muscle contruction efforts (muscle tissues will become stronger - more meat-kike structures) in our aseptic corporate facilities in the stated Brownsville area. As Fig. 5 shows we will have the Distillation Boats. The main idea is that the equator area is mostly sea / ocean based and the distilled water manufacture has to be in the flatable form. For that purpose we do not plan to have the sea/ ocean locations of said boats far away from thje ground where we will be storing our distilled water for shipping to the new type of the gas stations. The shipping on the ground and in the sea / ocean areas will be done using the transportation tools we will have to create using the DC motors we will get at the discounted prices at the US Shipyards from the decomposed submarines. Therefore the transportation will all be Carbon Negative for our business ventures. That indeed needs the investors money.

As you could see from Fig. 5 there is the storage area in each new type gas station. This area is designed on purpose that we plan to do the system of on-line ordering of goods not currently sold at the new type of the gas stations but needed for our valued customers. The fresh water shortage is already discussed above and we will sell distilled water in excess to the valuable customers. This is for drinking. We are not sure yet where we will get enough fresh water for bathing and laundry purposes. Apparently this will require tremendous amount of investments and we are ready to look for that.

Results

As discussed before will have the corporate facilities nearby the TX town Brownsville very close to the state Mexico and therefore in in the equator area as we have noticed per the amount of the Sun light available for the solar panels sating the corn harvests near McAllen TX area. This seems to be the best location since in Florida the environment is not organized well enough to survive the storms caused by Atlantic Ocean.

As discussed before the sales of the Carbon Negative fuels will help to reduce the air CO_2 level proportional to the use of said Carbon Negative fuels. Burning f said fuels produces the air CO2 as well as the use of the fuels originating from petroleum. The main question we have to discuss at the level of the Executive Branch of the US Government is the balance of the air CO_2 use for the Carbon Negative fuels manufacture and the amount of the Carbon Negative fuels used for the Gasoline and the Diesel fuel engines. The balance has to be on the side of the Carbon Negative fuels overproduction.

We do sincerely anticipate the wide distribution of the new type of the gas stations we have proposed herein. Said gas stations will not only sell the Carbon Negative fuels near Brownsville TX but possible Nationwide and then if successful Wolrd-wide. That obviously depends on the availability of the investor’s funds.

The Carbon Negative foods manufacture depends on the availability of the proper Ph. D.-students we pan to have. That amounts determined by our capability to invest our corporate funds into the efforts to invite the successful graduates from the Moscow State University we we already tried to make and will continue to do that. The need for the facility to house said Ph. D. students is obvious. The housing has to be with the perfect survellance systems installed and working to monitor the life of said Ph. D. students during their resting time or any time they will be out of the corporate work. No alcohol consumption or other not pleasant and health damaging habits will be tolerated in the residential area of said students, and the surveillance personnel has to be funded well.

Discussion

As we have stated already our purpose is to resolve the global environmental problem outlined before. Another part of said problem is the existence of the international petroleum corporations on the US soil. Said corporations actively produce air CO_2 at their refineries (the total amount of petroleum refineries on the territory of the continental US is 80) and produce fuel by distilling petroleum at said refineries to manufacture Gasoline and Diesel fuel which will be used at cars / trucks to produce the air $CO_{2.}$ The United States of America was founded by the immigrants from England, Ireland, Scotland and similar countries. And people eventually had everything to contribute to their country as it is written in the Declaration of Independence accepted for ruling on July 4th 1776. Threfore, the task is now to explain how said international petroleum corporations affect the environment with the purpose to get rid of them. That has to be done by the Executive Office of the US Government since the efforts of ordinary people are not effective. Yu might take a look at the declaration section of this original article to learn about the attempted murder SHELL subjected the Author in response to his proposal to SHELL to commercialize his proprietary technology of gasoline manufacture from the air CO_2 [12].

Fig. 6 outlines the efforts to put simultaneously and at the same time to get rid of the international petroleum corporations.

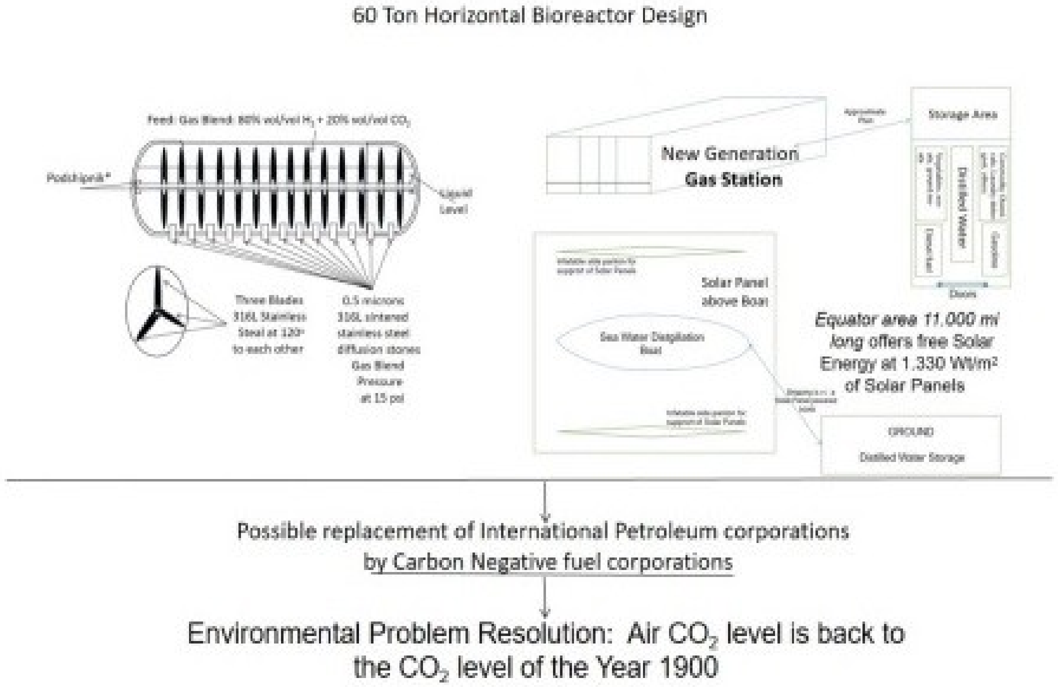

60 Ton Horizontal Bioreactor Design
Feed: Gas Blend: 80% vol/vol H_2 + 20% vol/vol CO_2
Podshipnik*
Liquid Level
Three Blades 316L Stainless Steel at 120° to each other
0.5 microns 316L sintered stainless steel diffusion stones Gas Blend Pressure at 15 psi
New Generation
Gas Station
Storage Area
Distilled Water
Doors
Solar Panel above Boat
Sea Water Distillation Boat
Inflatable side portion for support of Solar Panels
Inflatable side portion for support of Solar Panels
Equator area 11,000 mi long offers free Solar Energy at 1,330 Wt/m² of Solar Panels
GROUND
Distilled Water Storage
Possible replacement of International Petroleum corporations by Carbon Negative fuel corporations
Environmental Problem Resolution: Air CO_2 level is back to the CO_2 level of the Year 1900

Fig. 6. the solution to the global environmental crisis is the replacement of the international petroleum corporations by the Carbon Negative corporarions headed by the Author. This figure contains the image of the horizontal bioreactor for the manufacture of the Carbon Negative fuels [13], the new type of the gas stations for sales of carbon negative fuels and Carbon negative genetically engineered foods,, solar panels fro powering the horizontal bioreactors, corporate infrastructure, transportation tools inside the corporations, sea water distillation boats with solar panes fro the sea water distillation, alakaline batteries for the overnight operations, DEC motors fr the movement purposes, the DC electric engines from the US shipyards, the storage facilities for the distilled water, and the distilled water at the new type of gas stations.

About the storage facilities we plan to have. That obviously requires a lot of supportive energy to do the political work with the elected officials to convince the US Government to do the consulting and mentoring of the African Continent officials to allow our distilled water storage facilities on their territory. Might be there will be the time to occupy the homeless people around the United States and who have the African heritage to do this kind of job on the territory of the African Continent. We are thinking herein of the fresh water from the sea / ocean water for the laundry and bathing purposes. But this is for our employees to be involved actively into this process.

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Declaration Section

Ethics approval and consent to participate.

The Author has received all the proper documents granting the Ethical Approval and the Consent to Participate from the State of Texas officials. The Author has made sure that the ethical approval and his consent to participate in preparation and submission for publication of this article were properly approved by the respective authorities of the State of Texas.

Consent for publication.

The Author has expressed his complete consent to participate in work with this article and its publication in this Journal.

Availability of data and materials.

The Author makes all his data and materials herein available for any third party. The data and materials might be obtained from the Author at PO Box 300230, Houston, TX, 77340. Email drmtyurin64@gmail.com. If any third party needs any materials used to publish this article, please, do contact the Author.

Competing interests.

This article is another step in the war which has started by SHELL International Petroleum Corporation some time back by attempted murder of the Author. The people hired by SHELL has totaled the Author's corporate car and did some other illegal things to the Author which have concluded the Author that the war with the international petroleum corporations has started already. No Houston FBI or Houston Police investigation of said attempted murder has happened and this is behind the responsibility of the Texas Governor with all the legal remedies the Author might use in his fight to sue the State and its Governor Gregory Abbott. The attempted murder has the statute of limitations 20 years, and there are jurisdictions above the level of the State of TEXAS. The Author had certain legal problems with the at that time Attorney General of the State of Texas in 2013, now Texas Governor, Greg Abbott and the Author is going to resolve all the legal problems with the Texas Governor, regardless would he be dismissed or not. The corporate Author's website http://syngasbiofuelsenergy.com [21] was destroyed by the person, the Attorney of Hirsch and Westheimer Law Firm, PC by the last name Levy. She belongs to the same family which owned or owns the grocery stores chain named "Fiesta" in Houston Texas. The Author was unable to find a lawyer in Texas to file the respective federal law suit and recover his corporate website, but the Author has the US Constitutional right to recite this website in the references herein. Therefore the Author has multiple legal problems with the State of Texas and the Author is going to resolve said legal problems at the respective Court level in the US. The Author was already involved into the war which has been started by the International Petroleum Corporation SHELL. The Author has approached SHELL offering them for the commercialization the proprietary technology of Gasoline or Diesel fuel manufacture from the air CO_2, not from petroleum which SHELL and other international petroleum corporations use. SHELL representative met the Author, got his draft of the at that time in publication article on creation Gasoline from the air CO_2 [2]. SHELL hired two Mexicans to kill the Author in the car accident, paying the possibly around $6,000 for this dirty job, which has been done in Houston TEXAS at the US59 down South (9494 Southwest Fwy). The Houston FBI and the Houston Police were contacted by the Author multiple times over his mobile phone however there was no any detailed and thorough Police or the FBI investigation of said attempted murder of the Author since as the Author trusts, both Houston FBI and Houston Police are totally corrupted by the international petroleum corporations. Therefore any law is not used in the State of Texas to hurt said corporations. Therefore the Author has to look for the law enforcement outside of the State of Texas, at the National level and he will do that to affect the Texas Governor Abbott for his actions of 2013 and have him resign from his position. Therefore the Author has conflict of interests with the State of Texas, TEXAS Governor Gregg Abbott, Texas FBI and Texas Police. Since that time more scientific publications by the Author on the Gasoline and Diesel fuel production from the air CO_2 came out [11-47]. The US patents are extremely expensive, therefore the Author uses instead of patents scientific publications. Publications are as good as the US patents, each the US patent has to claim something better than the Author already did in his scientific publications. The

Author working on the Acetogens-biocatalysts has no any competition in the world because of his prior invention, the electroporation / electrofusion Generator, already sold as a sample (with no right for reproduction) to the US corporation BTX, Inc. / Genetronics, Inc. (San-Diego, CA). Said Generator and the invented by the Authorgenome tailoring technology make him with no any competition in the whole World. The Author has conflict of interest with his Ph. D. Supervisor, Professor Boris A. Shenderov, who apparently worked for the KGB in the former Soviet Union. In 1992, when the Author has applied form the first International Passport of the USSR, we went to the local Police department and set in line much before the International Passport department started working . When the Author has entered said local Police Department he immediately was arrested and jailed in the local prison without any announcement of his fault why he was arrested. The Author has recently changed his job leaving Professor Shenderov and joining the USSR Research Institute GNIIGENETICA. Therfore Prof. Shenderov started making every possible efforts to harm the Author with the use of KGB. Therefore the Author instead of getting his first International Passport of the USSR was arrested and without any notification of the crime he has committed he was arrested and forwarded with the machine guns armed Police workers to the local jail. In the local jail the Author was placed with another five persons, criminals, who knew what for they were arrested and jailed and smoked tobacco heavily right in the prison jail cell with the size of about 5.5 x 5.5 x 5.5 meters (about 10 x 10 x 10 feet). Because of said tobacco smoke the Author became very sick and in five hours after being jailed he asked the God he never prayed to (the Author is the ateist) to take the Author to Haven. The Author wanted to die at said moment. His blood pressure and heart pulse were astonishingly high, and the Author was really sick at said time. He started knocking inside the jail cell to the cell entrance door trying to get attention of the Policemen on duty. But that was not effective and no medical help was rendered by the Police to the Author at the Author's requests. He asked the God to make him dead, he asked God to take him to Haven. Suddenly the Author has heard the God's voice right in the Author's head. The God said in English: "This is not your time to die yet . You have not done your major business yet. Calm down, try to relax and wait till the Police understands that they were mistaken with you and will release you". Indeed in a few days the Author was released and has received his first International passport of the USSR. In 2001 the Author has recovered that he has being doing wrong things at his work and started working on the Carbon Negative fuels and genetically engineered foods on the base of Acetogens. That was the major business the Russian God told to the Author in 1992 at the jail cell when the Author has asked his God to take him to Haven and die. Therefore the Author has the conflict of interest with his former Ph. D. Supervisor Prof. B. A. Shenderov. The Author states herein that certain articles in the reference section cited Berzin V. Berzin VG was the business partner of the Author during his time at Syngas Biofuels Energy. Inc (2007-2013). He even paid his own $300 to start said business and spoke to his personal attorney to start said business registering it with the state of TX. However Berzin V did not participate in no actual work at said corporation and obviously did not do any contributions to the articles listed in the reference section herein. His authorship was included as such as he paid for said business. That is all the readers want to know. Berzin V. retired at the age of 65 and went to the retirement house which name is kept by him strictly confidential to avoid the Author of contacting him at any time. The Author recites publications where the authors were Drs. M. Kiriukhin and E. Gak. Said authors were paid significant amounts of cash by the Author for doing their research when the Author has hired them in the Russian Federation to do said R & D projects on the Acetogens when the Author was the CEO, Executive Chairman, President of Tyurin Enterprises, LLC.

Funding.

The Author has received no funding. The investors of the Author has read this article draft to his investors and they have decided not to include no funding information as they have stated to the Author. They stated the Author should write “No Funding” per this original article. *No funding.* *No funding was used to prepare and publish this original article*. The available investors have declined to provide their information for this publication. They have suggested to note

that the article was prepared and published with no any funding source.

Authors' contributions.

The Author has performed the Conceptualization of the main idea of this original article. The Author has performed the Data curation per this original article. The Author has performed the Formal analysis of all the data used to prepare this original article. The Author has performed the Funding acquisition per this original article. The Author has performed the Investigation per this original article. The Author has created the Methodology per this original article. The Author has performed the Project administration doing that himself. The Author has identified and used the Resources per this original article. The Author has identified and purchased the Software for this original article. The Author has conducted the Supervision, Validation and Visualization. The Author has wrote the original draft of this article. The Author has performed the Writing - review & editing - of this original article. The Author has submitted it. The Author is the only owner of all materials disclosed in this original article. The Author has plans to distribute his proprietary products after their approval as needed. The Author might be contacted for the data and materials at PO Box 300230, Houston, TX, 77230, drmtyurin64@gmail.com. The Author contributed to the study conception and design. Material preparation, data collection and analysis were performed by the Author. The first draft of the manuscript was written by the Author. The Author read and approved the final manuscript.

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Authors' information.

The Author has the B. Sci. In Biological Engineering (1984), M. Sci. In Biology (1985), M. D. in Internal Medicine (1986) (all from Saratov State Medical University, the USSR) in addition to the Ph. D. in Molecular Biology, Molecular Pharmacology, Microbiology (1990) from the USSR Research Institute for Antibiotics (Moscow, the USSR). The Author Dr. Tyurin Michael Vladislavovich has changed his second name from “Vladimirovich” to “Vladislavovich” after his father, Professor, Dr. Tyurin Vladimir Iljich has changed his first

name from “Vladimir” to “Vladislav” in 2017. The Author at his corporations can be reached at PO Box 300230 .in Houston TX 77230 and via Email drmtyurin64@gmail.com.

Originality-Significance Statement

The Author has wrote this original article based on his originality of the business approach and the existing resistance of the International Petroleum corporation to the technology of manufacturing carbon negative fuels to replace their production of fuels originating from petroleum. The reduction of the air CO_2 levels towards the pre-petroleum era of the year 1900 is paramount,since our planet looses fresh water to the outer Space vacuum. NASA has confirmed that in 2010 sating that the Earth has reached the “Point of No Return” to the healthy environmental conditions suitable for life on our planet. The new family of the gas stations selling not only Carbon Negative fuels but also foods for cooking at home and commodity chemicals for the households will save a lot of time for the customers of said new gas stations.

Introduction

Global environmental crisis that Earth went into due to the actions of the international petroleum corporations gets stronger and stronger. It is not only the Global Warming itself. It is the loss of the fresh water vapors to the outer Space vacuum.

Increased production of the air CO_2 leads to the loss of the fresh water to the outer Space vacuum. It is like in the process of lyophilization of microbial cultures the Author has devoted almost 28 years of his over 33 years of the Senior Executive jobs he has ever had since 1992. In the outer Space the fresh water sucked by the Space vacuum moves to any direction away from Earth. If you look at the water reserve of Earth you will see that the fresh water is available herein on Earth in a very little amount of which only 30% are available for the Humankind consumption, the other parts of the fresh water are in the Ground or in the air as the fresh water vapors to be sucked by the Space vacuum. The severe shortage of the fresh water is anticipated in the next 10-25 years from now. The fresh water shortage means the shortage of the crops and the livestock manufactures. That food shortage leads to the Global Starvation on Earth.

The Author is the owner of several Carbon Negative fuel corporations. He also projects depending on the availability of the investor’s funding also the development of the Carbon Negative genetically engineered foods to cope with the Global Starvation and providing the Carbon Negative genetically engineered foods for the starving at that time Humankind.. In the meantime certain educated (Mr. Jeff Bezos and Mr. Elon Mask) capitalists are educated well enough to see the Environmental crisis outlined by the Author herein. They now started investing their corporate funds into the elaboration of the outer Space travel technology development above what has been done with the International Space Station. By doing said investment they do anticipate that the potion of the Earth population will travel in the unknown yet direction to the unknown yet planet(s) found to be very similar to Earth by the temperature regimens and the fresh water availability.

However the Author is persistent in the Earth location and offers the solution to said environmental crisis such as the development of Carbon Negative fuels and the Carbon Negative genetically engineered foods to cope with the consequences of the fresh water shortage. The Author trusts that the domination of the Carbon Negative technologies over the existing technologies based on the energy generation using the petroleum-originated fuels has to be implicated nationwide in the US and World-wide globally. Termination of the existing international petroleum corporations is essential not to mention that SHELL in 2018, on December 10, tried to kill the Author in the car accident (HPD report is available for reference) after the Author has presented to SHELL his Carbon

Negative technology of the Gasoline replacement manufacturing from the air CO_2 with the manufacturing cost of $0.35 per gallon at the SHELL manufacturing cost of a gallon of gasoline (C_7-C_9) from petroleum is now over $1.75.

This E-book has eight chapters. The seventh chapter is devoted to the tremendous therapeutic effect of the intestinal bifidobacterial surface polysaccharides to restore the gastro-intestinal epithelium of people sick with the Cholera infection. Said "Mixture" of the surface bifidobacterial polysaccharides will help also to other sick people who suffer from a number of various health problems associated also with the loss of the normal gastro-intestinal epitheluim. The presented in the Chapter 7 data on the facilitating cure of the intestinal dangerous infectious disease Cholera might be well justified enough to set up the p[roper clinical trials in the US to release said "Mixture" of bifidobacterial surface polysaccharides for the general consumption at pharmacies nationwide.